MANAGEMENT PERCEPTIONS OF AUDIT QUALITY:

A QUALITATIVE AND QUANTITATIVE

INVESTIGATION

by

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A dissertation submitted to the faculty of
The University of Utah
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

in

Business Administration

David Eccles School of Business

The University of Utah

August 2015

The University of Utah Graduate School

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ABSTRACT

In this dissertation I investigate management perceptions of audit quality. Despite management's key stakeholder role in the audit process, their impact in assessing and evaluating audit quality has been overlooked in the post-Sarbanes-Oxley environment. Although audit committees are charged with governance over the audit process, management influences auditors, and by extension audit quality, management both influences day-to-day interactions between the auditor and the audit client and exerts significant influence on the audit committee's decision to retain an auditor for future engagements. Thus, auditors are incentivized to understand how their actions are perceived by management. For my overall research question, I ask what factors influence management perceptions of audit quality.

I provide two major contributions to the literature. First, I surveyed management about their perceptions of audit quality and how auditors are able to demonstrate audit quality on their engagements. After coding these responses according to academic and regulatory frameworks of audit quality, I find that management focuses most heavily on input and process characteristics of the auditor and audit engagement when evaluating audit quality. Output characteristics are important when defining audit quality, but are considerably less important to management in evaluating auditors. Additionally, academics have typically overlooked the impact of interpersonal relationships between stakeholders in the audit process, but these relationships are important to management in

their evaluations of auditors.

Second, I conducted an experiment that investigates how management views an auditor's use of industry norms as a justification method for an audit adjustment under imprecise accounting standards. I find that under more precise accounting standards, management evaluates audit quality based on the underlying accounting attributes of the transaction. When accounting standards are less precise, management rates audit quality higher when auditors justify a decision using an industry norm regardless of the underlying attributes of the transaction. Thus, when accounting standards are less precise (i.e., more principles-based), auditors may have an incentive to engage in herding behavior at the expense of their professional judgment.

To my family, for their support along every step of the journey.

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ACKNOWLEDGEMENTS

This dissertation represents a collaborative effort, and I would be remiss if I failed to recognize those whose help has been so instrumental. First, my committee members: Brian Cadman, David Plumlee, Don Wardell, David Wood, and especially my chair, Martha Eining. These individuals have given so much in time and effort, and their feedback has been critical in helping this project to develop. I have also benefited from feedback provided by workshop and conference participants from the 2014 BYU Accounting Symposium, the 2014 Western Region Meeting (and specifically Jordan Lowe as a discussant), the 2015 Audit Midyear Meeting, Binghamton University, Florida Atlantic University, the University of Cincinnati, and the University of Utah. Additionally, I wish to thank Chris Agoglia for allowing me to refer to a set of his experimental materials.

I am also grateful to the Accounting Doctoral Scholar program and the University of Utah for the research support that they have provided during my years in the PhD program.

I would like to thank my parents, Scott and Jane Boyle, who have instilled in me a love of learning and a willingness to work. The best advice I received from them was to never give up. I would also like to thank Clark and Cherie Thiriot, whose love and support has never wavered.

Finally, I couldn't have done this without an enormous amount of help and

support from my family. Hannah, Katherine, and Jason were always available to provide smiles, hugs and kisses, high fives, and words of encouragement when I hit a milestone. They were willing to read stories, play games, shoot hoops, or kick around a soccer ball when I needed a break from work, but they were also patient and understanding during those times that my work prevented me from being as available as they would have liked. Finally, my wife, Diana, has been a rock throughout this process. She's always been right by my side, willing to shoulder an extra load of work in order to help me meet deadlines, and her faith in and love for me has always kept me going. Her name may not be on this degree, but I couldn't have done it without her.

CHAPTER 1

INTRODUCTION

There are many important stakeholders in the audit process besides the auditors, such as audit committee members, management, investors, and regulators. Each of these groups can influence auditor decisions, and each may have different opinions on what constitutes a quality audit. In order to more fully understand the incentives and motivations that influence auditor decisions, we must understand the impact of these auditor decision making on these different groups. I contribute to the accounting literature by investigating factors related to management perceptions of audit quality.

The relationship between management and auditors was significantly impacted by the passage of the Sarbanes-Oxley Act (SOX). One key provision of SOX was to shift responsibility for the oversight of auditors, including the decision to hire and fire audit firms, from management to audit committees. In theory, taking away the decision to hire and fire an auditor from management creates an environment in which auditors should be able to make decisions that are unpopular with management without risking the loss of a future revenue stream. Despite this attempt by SOX to minimize management's influence on auditors, management still plays a key role in the decision to hire and fire an auditor. Additionally, management has a central role in the audit process. Thus, management can impact audit quality in multiple ways, and their perceptions of audit

quality remain important.

Although SOX placed responsibility with the audit committees for the hiring and firing of auditors, management can and does still influence that decision. Management spends much more time with an auditor than does the audit committee and has opportunities to see and evaluate audit work on a more frequent and intimate basis. If management has concerns with the auditor's work, they can easily share those concerns with the audit committee. Although an audit committee makes an independent decision about the auditor, they would be negligent in their duties if they failed to consider concerns that arise through management. Thus, it should not be surprising that management is still seen as the "driving force behind auditor appointments and terminations" (Cohen, Krishnamoorthy, & Wright 2010, 752).

Management also has the most interaction with auditors on a day-to-day basis during the audit engagement. DeFond and Zhang (2014) equate audit quality with earnings quality, and although management has ultimate responsibility over the financial statements, the formation of those statements is an evolving process. Management typically creates a preliminary trial balance for the auditors to use in their beginning testwork. As auditors find mistakes or areas of disagreement, they propose adjustments to the trial balance numbers. Auditors and management will then typically enter a negotiation process in order to come to an agreement about how transactions should be recorded. Management will also create the first draft of the final financial report, including the notes to the financials, but the entire report will be subject to the auditor's review prior to release. Auditors will suggest additions, deletions, or corrections to any area of the financial report that they feel needs to be improved. In this way, auditors and

management can be considered co-creators of the financial statements (Salterio 2012), and management perceptions of auditors can influence this working relationship.

Interactions (and perceptions of interactions) between auditors and management can also play an important role in auditor decision making on an audit engagement. Trompeter (1994) finds that when client retention becomes more important to an auditor's compensation, auditors become less likely to suggest adjustments that decrease net income. Bennett and Hatfield (2012) find that when auditors perceive a social mismatch with management, they are less likely to follow up on questions. They are also vaguer in the documentation of their testwork, which can impair a supervisor's ability to perform an appropriate review of the initial testwork. These actions have the potential to reduce the quality of the audit services provided, which subsequently can reduce the quality of the financial statements.

I first reviewed the accounting literature to gain an understanding of what we already know about management's influence on the audit process. I focused especially on areas of audit quality and auditor-management interactions. From this review, I identified two major questions that have yet to be addressed in accounting research. First, what factors are important to management for defining and evaluating audit quality? Second, how does an auditor's use of industry norms under imprecise accounting guidance impact management perceptions of audit quality?

In order to address these questions, I used two different research methods. First, I conducted a survey of management participants to better understand how they define audit quality and how auditors are able to demonstrate audit quality on an engagement. I also gathered early feedback on the value provided by the Center for Audit Quality's

(CAQ) Audit Quality Indicators (AQI). After coding responses according to several academic and regulatory audit quality frameworks, I find that auditors value input characteristics (e.g., knowledge and training, independence), process characteristics (e.g., appropriate tests, efficiency), and output characteristics (e.g., the audit report, recommendations to management) to differing degrees. All three categories are used to define audit quality; however, when asked how auditors demonstrate audit quality, respondents focused most heavily on the input and process characteristics (including interaction characteristics such as communication between auditors and management).

Second, I performed an experiment testing the impact of an auditor's use of industry norms as a justification method for an adjustment to the financial statements under imprecise accounting standards. Participants took the role of a controller for their company and evaluated auditor decisions to propose adjustments to the financial statements. I manipulated the precision of the accounting framework, the justification method used by the auditor, and the aggressiveness of management's preadjustment decision (which proxies for the quality of management's initial decision). I find that when accounting standards are more precise, management evaluates the auditor based on the accounting attributes of the decision and not on the justification method used. When accounting standards are less precise, however, management evaluates audit quality as higher when auditors justify a decision using an industry norm, regardless of the underlying accounting attributes of the transaction in dispute. This evaluation creates an incentive for auditors to engage in herding behavior, which occurs when auditors automatically fit accounting transactions to industry norms. Herding behavior threatens one of the key strengths of a principles-based accounting framework – allowing

transactions to be recorded based on their substance – by turning an industry norm into pseudo-authoritative guidance.

The remainder of my dissertation is organized as follows: Chapter 2 is a literature review of the relevant accounting and psychology literature used, Chapter 3 presents the results of the audit quality survey, Chapter 4 is the main experiment on the impact of an auditor's use of industry norms under imprecise accounting frameworks, and Chapter 5 provides concluding remarks, including opportunities for future related research.

CHAPTER 2

LITERATURE REVIEW

Introduction

In this chapter I review the literature that is relevant to my overall research question of understanding management perceptions of audit quality. First I review research on audit quality, and specifically stakeholder perceptions of audit quality. Second I discuss research on the impact of principles-based versus rules-based accounting standards. Third I provide an overview of the Elaboration Likelihood Model, which is the underlying theoretical foundation for my main experiment. Fourth I discuss the negotiation literature to the extent that it informs my use of an auditor's proposed adjustment as an appropriate experimental scenario for my research question.

Audit Quality

Audit quality has been, and continues to be, one of the most important topics in auditing, both in industry and academia. Several regulatory bodies are involved with projects that seek to define, measure, and/or evaluate audit quality, including the International Auditing and Assurance Standards Board (IAASB) (IAASB 2014), the United States Department of the Treasury (Treasury 2008), the Public Company Accounting Oversight Board (PCAOB) (PCAOB 2012, 2013), and the Center for Audit

Quality (CAQ) (CAQ 2013). Audit firms have also prioritized audit quality with the release of annual audit quality reports (EY 2014; PwC 2014). Unfortunately, no consensus definition of audit quality or its proxies has yet been reached. In this first section I discuss several aspects of audit quality, including definitions, common proxies in academic research, and proposed frameworks, as well as perceptions of audit quality of various stakeholders in the audit process.

Definitions of Audit Quality

There are currently several different, though related, definitions of audit quality. In academic research, DeAngelo (1981, 186) defines audit quality as "the market-assessed joint probability that a given auditor will *both* (a) discover a breach in the client's accounting system, and (b) report the breach." Carcello, Hermanson, Neal, and Riley (2002) equate audit quality with the level of assurance provided. This definition aligns with the Government Accountability Office's (GAO) interpretation of audit quality, which is that audit quality

> refers to the auditor conducting the audit in accordance with generally accepted auditing standards (GAAS) to provide reasonable assurance that the audited financial statements and related disclosures are (1) presented in conformity with GAAP and (2) are not materially misstated whether due to errors or fraud. (GAO 2003, 13)

DeFond and Zhang (2014, 276) take this idea one step further by associating audit quality with financial statement quality in their definition, which is stated as "greater assurance that the financial statements faithfully reflect the firm's underlying economics, conditioned on its financial reporting system and innate characteristics." The IAASB, on the other hand, focuses more on the auditor side of the equation. They define audit quality as being achieved when engagement teams

> exhibit appropriate values, ethics, and attitudes; [are] sufficiently knowledgeable, skilled, and experienced and [have] sufficient time allocated to perform the audit work; appl[y] a rigorous audit process and quality control procedures that compl[y] with law, regulation, and applicable standards; provide useful and timely reports; and interact appropriately with relevant stakeholders. (IAASB 2014, 4)

Audit Quality Proxies

Due to the private nature of the audit process, proxies for audit quality typically focus on either outcome measures or auditor/firm characteristics. Examples of outcome measures of audit quality include litigation or regulatory enforcement actions against auditors, correct issuance of a going concern opinion, and, under certain circumstances, auditor switches (Francis 2011). These proxies are limited in the sense that they only effectively identify examples of poor audit quality. Alternatively, firm and/or auditor characteristics may provide opportunities to distinguish between different levels of audit quality. These characteristics include auditor size (Teoh & Wong 1993), degree of independence of the auditor, as measured by fee dependence (Chung & Kallapur 2003), earnings quality of the financial statements (Francis, Maydew, & Sparks 1999; Chi, Huang, Liao, & Xie 2009), and industry expertise (Krishnan 2005).

Frameworks for Evaluating Audit Quality

Several frameworks have been recently developed in an attempt to organize current knowledge of audit quality and provide a template for evaluating and critiquing the level of audit quality provided by engagement teams. These frameworks have been developed in both the academic and practitioner literature, and each will be discussed briefly.

Francis (2011)

Francis (2011) focuses on identifying and categorizing the drivers of audit quality. He identifies six different units of analysis. The first is audit inputs, and can refer to either the audit tests that are used (e.g., confirmations, analytical procedures) or characteristics of the engagement team personnel (e.g., skepticism or engagement team tenure). The second is audit processes, which refers to the implementation of audit tests by the engagement team (e.g., fraud brainstorming sessions or the hours spent on an engagement). The third unit of analysis is characteristics that relate to the audit firm (e.g., firm size, industry expertise, partner compensation, firm tenure on a specific client, firm industry expertise, and firm fee dependence). The fourth unit of analysis is the audit industry and audit markets, which can refer to the structure of the audit market (oligopoly of Big X firms or concentration of markets) or structure of the industry in which an audit occurs. The fifth unit is the impact of the institutions involved in the audit process. This includes regulatory bodies (e.g., SEC, PCAOB, AICPA, IAASB, and state boards of accountancy), governance structures (e.g., client boards of directors and audit committees), and the legal environment under which an auditor operates. The sixth unit of analysis is the economic consequences of audit outcomes (e.g., the information contained in audit reports, firm cost of capital, and analyst reports). See Table 1 for the full model.

Knechel et al. (2013)

The second framework was developed by Knechel, Krishnan, Pevzner, Shefchik, and Velury (2013) and is described as a balanced scorecard approach. This balanced

scorecard has four measures: inputs, process, outcomes, and context. Inputs are focused on the characteristics of the audit team, such as skepticism, incentives, knowledge and expertise, and within-firm pressures. The process measure relates to the characteristics that are inherent to the audit process, such as auditor judgments, risk assessments, analytical procedures, auditor-client negotiations, and the engagement review process. Outcomes deal with observable traits and/or reports that arise from the audit process, such as restatements, earnings quality, audit reports (e.g., going concern opinions) and regulatory reviews. Finally, the characteristics that are associated with the context of the audit include abnormal audit fees, auditor tenure, partner compensation, and fee premiums. See Figure 1 for the full model.

DeFond & Zhang (2014)

The third academic audit quality framework comes from DeFond and Zhang (2014). Their framework is derived from an economic model in which audit quality is influenced by client demand and auditor supply. Both client demand and auditor supply are subject to incentives and competencies. Examples of client demand incentives include agency costs and regulation, while auditor incentives include reputation, litigation, and regulation. Client demand competencies include audit committees and internal audit; auditor supply competencies include inputs to the audit process and expertise. See Figure 2 for the full model.

IAASB (2014)

The IAASB also released an audit quality framework in 2014. This framework is focused on five elements: input factors, process factors, output factors, key interactions, and contextual factors. The input, process, and output factors can be evaluated at the engagement, firm, and national (or jurisdictional) levels. Input factors consist of two main categories: 1) exhibiting appropriate values, ethics, and attitudes, and 2) having sufficient knowledge, skill, and experience, and devoting sufficient time to an engagement. Process factors focus on the audit process and quality control procedures. Output factors consist of any type of output generated by the audit process, such as audit opinions, auditor reports to management and those charged with governance, audited financial statements, and firm transparency reports. Interactions relate to any communication between stakeholders in the audit process, which includes auditors, management, those charged with governance, regulators, and users. Finally, contextual (also termed environmental) factors include regulation, business practices, financial reporting frameworks, information systems, corporate governance, and the litigation environment. See Figure 3 for the full model.

CAQ (2014)

The PCAOB has been working on a concept release on audit quality indicators for more than two years (Thomson Reuters 2014). In advance of the PCAOB's concept release, the CAQ released a paper identifying potential audit quality indicators (AQI) (CAQ 2014). These AQIs are designed to assist audit committees in their oversight role in the audit process by providing metrics with which audit quality can be evaluated. The

CAQ envisions these AQIs as a starting point in the audit quality discussion and is continuing to test and solicit feedback on their usefulness.

The AQIs are divided into four categories. The first is firm leadership and tone at the top, and it focuses on characteristics of the audit firm such as "the importance of audit quality, independence and objectivity, and [how the firm] holds itself accountable for the effectiveness of the audit firm's system of quality control" (CAQ 2014, 3). The second category is engagement team knowledge, experience, and workload, and it focuses on individual audit characteristics such as auditor knowledge, experience, training, amount of audit work assigned to specialists, and workloads of engagement team members. The third category is monitoring, and it focuses on inspections processes (e.g., internal firm quality reviews and PCAOB inspections) that are designed to ensure compliance with firm and professional standards. The fourth category is auditor reporting, which looks at outcome measures such as restatements and withdrawn internal control reports.

Perceptions of Audit Quality

Research into the perceptions of audit quality generally falls into one of two categories: 1) survey research that seeks to understand overall perceptions, and 2) behavioral research that focuses on specific settings and circumstances. Each of these two types of research is discussed here.

Survey Research in Audit Quality

Schroeder, Solomon, and Vickrey (1986) surveyed audit partners and audit committee chairs from *Fortune 500* companies and asked them to rate 15 factors in terms

of their perceived impact on audit quality. These factors were composed of both engagement team factors (e.g., level of partner/manager attention given to the audit, planning and conduct of the audit work, and communication between the audit team and management), and firm-wide factors (e.g., provisions to keep auditors up-to-date technically, quality control procedures of the audit firm, and regulatory agency expertise of the audit firm). Responses indicate that both audit committee chairs and audit partners generally rate engagement team factors as more important indicators of audit quality. Interestingly, three factors average a slight impact rating: litigation the firm has been involved in, recentness and outcome of peer review, and relative significance of total professional fees. Despite the lack of perceived importance by partners and audit committee chairs, these three factors are consistently cited in the academic literature as indicators of audit quality (or lack thereof).

Carcello, Hermanson, and McGrath (1992) extended the work of Schroeder et al. (1986) by adding additional audit quality factors to their survey and distributing it to audit partners, *Fortune 1000* controllers, and sophisticated investors. Similar to Schroeder et al. (1986), they find that characteristics related to the engagement team are perceived as being more important to audit quality than are characteristics related to the audit firm. Overall, the four most important factors are: engagement team and firm experience with the client, responsiveness to the client's needs, industry expertise, and compliance with general standards (competence, independence, and due care).

Although these studies are important in understanding audit quality, both surveys were conducted prior to the passage of the Sarbanes-Oxley Act (SOX). Due to enormous changes that SOX implemented in the auditing process, attitudes and perceptions of audit

quality may have changed since these studies were conducted. Christensen, Glover, Omer, and Shelley (2014) have a working paper that investigates more recent perceptions of audit quality from the perspective of audit partners and sophisticated investors. They find that, when evaluating audit quality, auditors focus on compliance with the professional regulations and standards; however, the investors focus more on the individual characteristics of the auditors on the engagement team. These responses appear to indicate that auditors are placing an increased focus on the technical aspects of an audit during the post-SOX era. Investors, who have limited insight into the audit process, are still focusing on individual characteristics. Despite the differences between the groups in what constitutes audit quality, both groups agree that restatements are the best indicator of low audit quality.

Behavioral Research in Audit Quality

Most of the behavioral research that has investigated how auditor decisions impact perceptions of audit quality has been in the litigation stream of research and uses judges and/or jurors as the participant group. Kadous (2000) finds that jurors are subject to outcome effects (also known as hindsight bias) and are swayed by the severity of the outcome of an auditor's decision, rather than by the quality of the work performed. Research has also identified actions that can be taken to reduce the impact of this outcome bias. For instance, when jurors use the debiasing technique of having to evaluate two separate alternatives and assess the probability for the occurrence of either outcome, they are less likely to exhibit hindsight bias (Lowe and Reckers 1994). Additionally, Cornell, Warne, and Eining (2009) find that auditors can use either apology

or first-person justification during the testimony phase of a trial to mitigate jurors' perceptions of negligence.

Other studies have investigated methods that auditors can incorporate into the audit process in order to increase perceptions of quality. Buckless and Peace (1993) find that jurors attribute less blame to auditors who comply with government standards than auditors who comply with auditor established standards. Lowe, Reckers, and Whitecotton (2002) find that auditors who comply with a highly reliable firm decision aid are attributed less responsibility for negative events than auditors who override a decision aid, even if the decision aid is ultimately incorrect. Kadous and Mercer (2012) find that auditors' use of industry norms can provide safe harbor protections against litigation when accounting standards are imprecise. Boyle (2014) finds that industry norms are perceived as a higher quality justification method for decisions than either an auditor's professional judgment or firm interpretive guidance, regardless of the precision of the accounting standard. Additionally, he finds that jurors do not perceive a difference in quality between professional judgment and firm interpretive guidance. Grenier, Pomeroy, and Stern (2015) find that an auditor's use of judgment frameworks can be effective in reducing an expectations gap. They find that auditors using judgment frameworks receive lower attributions of blame, especially under imprecise standards. Reffett (2010) finds that auditors who perform additional procedures, but fail to discover a mistake, are perceived as more negligent than auditors who failed to even perform those additional procedures due to the effects of counterfactual reasoning.

Rules-Based and Principles-Based Standards

On July 30, 2002, the United States' Congress passed Public Law 107-204, better known as the Sarbanes-Oxley Act of 2002, or SOX. This act is best known for creating the PCAOB, requiring auditors to perform and report on tests of controls for audit clients, prohibiting auditors from providing certain nonaudit services to audit clients, and mandating audit partner rotation. Although less well-known, SOX also directed the SEC to study the feasibility of adopting principles-based standards in the United States (U.S. Congress 2002). In their report to Congress, the SEC recommended that accounting standards should be more consistently developed on a principles-based basis.[1] Specific characteristics of these frameworks include: a consistently applied conceptual framework, clearly stated objectives, sufficient detail for the standard to be operationalized and applied consistently, minimization of exceptions from the standard, and avoidance of the use of bright-line tests (SEC 2003).

During the same timeframe, the Financial Accounting Standards Board (FASB) and International Accounting Standards Board (IASB) met in Norwalk, Connecticut and agreed to work together in an effort to make their respective accounting standards as compatible as possible (FASB 2002). The SEC followed up on this agreement by issuing a roadmap in 2008 that outlined a proposed path for the United States to require the use of International Financial Reporting Standards (IFRS) for United States' issuers by 2014 (SEC 2008). Although the roadmap hasn't been fully implemented, and United States Generally Accepted Accounting Principles (US GAAP) remains the required accounting

[1] Congress also used the term "objectives-oriented" for this type of a framework. As they appear to be intended to mean the same thing, I will use the more common term "principles-based."

framework for public companies in the United States, the FASB and IASB have reached converged solutions for revenue recognition, inventory accounting, segment reporting, share-based payments, and more, and they are still working on issues surrounding impairment and insurance contracts (IASB and FASB 2012, 2013). Additionally, the United States is expected to continue to follow the recommendations of the SEC by working together with the IASB to find principles-based solutions for new accounting standards.

Two of the characteristics of a good principles-based framework, as identified by the Global Public Policy Symposium, are: 1) that it provides a faithful presentation of economic reality, and 2) that it allows for the use of reasonable judgment (GPPS 2008). Rules-based standards, on the other hand, may allow companies to structure transactions in a manner that obscures their true nature (FASC 2003). According to Robert Herz, former chairman of the FASB, these opportunities to exploit loopholes arise from the bright-line tests, exceptions to rules, and detailed implementation guidance that characterize rules-based standards (Businessweek 2002).

Recent research on the impact of the proposed shift from a more rules-based framework to a principles-based framework has focused on how the accounting framework impacts initial management decisions. Management has been found to make less aggressive decisions when operating under less precise accounting standards (Psaros & Trotman 2004; Agoglia, Doupnik, & Tsakumis 2011), although Jamal and Tan (2010) find that, under a principles-based standard, management's aggressive decisions are only constrained when the auditors also have a principles-based mindset.

Other research has focused on how auditors react to management decisions under

the different frameworks. Trompeter (1994) finds that auditors are more likely to propose a downward adjustment to financial statements when accounting standards are more specific, and Backof, Bamber, and Carpenter (2014) find that auditors allow more aggressive reporting when accounting standards are less precise. These studies provide some evidence that specificity in the financial statements provides an auditor with a stronger or more convincing argument when disagreements about accounting treatments arise. Conversely, other research has found that auditors are more likely to constrain aggressive reporting under a principles-based framework (Agoglia, Doupnik, & Tsakumis 2011; Cohen, Krishnamoorthy, Peytcheva, & Wright 2013). Ng and Tan (2003) show that authoritative guidance becomes more important as the strength of the audit committee decreases, which may help to explain the differences in the findings of these papers.

The Elaboration Likelihood Model

The Elaboration Likelihood Model (ELM) dates back almost 30 years and has been used extensively in many different disciplines. I do not attempt to provide a complete literature review of the ELM in this paper; rather, I focus on the development of the ELM and its use as a theoretical model in the accounting literature.

Development of the ELM

The ELM is a model that describes how individuals process persuasive information and was initially developed by Petty and Cacioppo (1986), although it has roots in earlier literature. As constructed by Petty and Cacioppo (1986), the ELM has the

following seven postulates:

1. People are motivated to hold correct opinions (p. 127).
2. Although people want to hold correct attitudes, the amount and nature of issue-relevant elaboration in which people are willing to able to engage to evaluate a message vary with individual and situational factors (p. 128).
3. Variables can affect the amount and direction of attitude change by: (A) serving as persuasive arguments, (B) serving as peripheral cues, and/or (C) affecting the extent or direction of issue and argument elaboration (p. 132).
4. Affecting motivation and/or ability to process a message in a relatively objective manner can do so by either enhancing or reducing argument scrutiny (p. 138).
5. As motivation and/or ability to process arguments is decreased, peripheral cues become relatively more important determinants of persuasion. Conversely, as argument scrutiny is increased, peripheral cues become relatively less important determinants of persuasion (p. 152).
6. Variables affecting message processing in a relatively biased manner can produce either a positive (favorable) or negative (unfavorable) motivational and/or ability bias to the issue-relevant thoughts attempted (p. 163).
7. Attitude changes that result mostly from processing issue-relevant arguments, (central route) will show greater temporal persistence, greater prediction of behavior, and greater resistance to counterpersuasion than attitude changes that result mostly from peripheral cues (p. 175).

These postulates combine to create two possible routes along which individuals may process persuasive information – the central route and the peripheral route. The

central route is used for systematic processing, which is more thoughtful and effortful, while the peripheral route is characterized by heuristic processing and relies more on external cues and mental shortcuts. In order to exert the extra effort required to engage in systematic processing, individuals must have both motivation and ability (collectively termed elaboration). If either of these characteristics is missing, individuals are more likely to use the less effortful heuristic processing. See Figure 4 for the ELM model.

Petty, Haugtvedt, and Smith (1995) document various determinants of both motivation and ability. The major determinant of motivation is personal relevance[2] (Johnson & Eagly 1989; Petty & Cacioppo 1979, 1990), which has often been proxied by asking college students about their opinions on a change to some type of university policy that will either be enacted at their own university or another university, or will be enacted in either the near or distant future (Petty & Cacioppo 1984). An evaluator's motivation may also be increased when the message is more surprising, such as when an expert provides a weak argument (Maheswaran & Chaiken 1991) or when an individual disagrees with a majority (Baker & Petty 1994), when multiple sources, rather than an individual source, present an argument (Harkins & Petty 1987), or when evaluators have an increased need for cognition (Cacioppo & Petty 1982). Additionally, increasing the personal responsibility of the evaluator, such as by being the sole evaluator rather than a member of an evaluation team (Petty, Harkins, & Williams 1980) or being required to discuss an evaluation (Tetlock 1990) can increase motivation.

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[2] Johnson and Eagly (1989) divide personal relevance into three categories: value-relevant, impression-relevant, and outcome-relevant. Outcome relevant messages are messages that apply to situations in which a persuasive message is salient to the goals of outcomes of the message evaluator. This is the type of personal relevance that I focus on in this paper.

There are also multiple determinants of ability. I categorize the determinants of ability into three categories: Internal, Environmental, and Message characteristics. Internal characteristics relate to characteristics of the evaluator, such as cognitive depletion (Sanbonmatsu & Kardes 1988) and technical ability and knowledge (Wood, Kallgren, & Priesler 1985). Environmental characteristics relate to the surroundings of the evaluator, such as distraction (Festinger & Maccoby 1964) and level of relaxation/comfort (Petty, Wells, Heesacker, Brock, & Cacioppo 1983). Message characteristics relate to the processed message and include incomprehensibility/ambiguity (Ratneshwar & Chaiken 1991), complexity (Cacioppo & Petty 1989), and delivery speed (Moore, Hausknecht, & Thamodran 1986).

The Elaboration Likelihood Model in Accounting Research

Although the ELM has not been used extensively in prior accounting research, it has served as the theoretical foundation for understanding how accountants evaluate differences and make decisions. Goodwin (1999) finds that auditors are sensitive to the integrity of both client management and external sources, especially when evidence received from both sources is inconsistent. Alexander (2003) finds that tax accountants will spend more time reviewing a memo from a lower credibility source if there is a lower probability of bias in the memo, but if there is a higher probability of bias, more time will be spent on a memo from a higher credibility source.

Source credibility is not the only factor that influences persuasion in accounting research. Bhattacharjee, Moreno, and Riley (2012) find that auditors who have a positive affect toward a client evaluate inventory obsolescence for both lower and higher

competence clients similarly. Burton, Emett, Simon, and Wood (2012) find that managers are more likely to be persuaded by in-house internal audit recommendations than outsourced internal audit recommendations and that quantified arguments from in-house internal auditors are more persuasive than nonquantified arguments. Glover, Prawitt, and Wilks (2005) find that a simple prompt to auditors to more critically examine evidence may lead to a stronger consideration of that evidence. Magro (2005) finds that more institutional knowledge can lead to broader information search, and Rich (2004) finds that auditor elaboration is greater when auditors are reviewing more critical audit activities.

Auditor-Client Negotiations

In an auditor-client negotiation setting, auditors find and present a potential adjustment to the client's financial statements. In this situation, clients often wish to avoid making changes to their financial statements, and a negotiation process ensues until both auditor and client can agree on a resolution to the proposed adjustment.[3]

The stream of negotiation literature began with Antle and Nalebuff (1991), who published a theoretical model of negotiation that was designed to show that the final financial statement product did not always reflect a conservative position. The unique position taken by these authors is that the financial statements are a joint product of the auditors and management, rather than solely management. Salterio (2012) refers to these

[3] This resolution may be any of the following: the client accepts the auditor adjustment, the auditor determines the adjustment is not material to the financial statements, the auditor and client agree on a compromise adjustment, or the client convinces the auditor that the original accounting is correct and no adjustment is necessary. In rare situations, the auditor and client may not be able to come to an agreement. If this occurs, the auditor would issue a qualified or adverse opinion.

two groups as co-creators of the financial statements.

In the intervening years, the negotiation process associated with proposed audit adjustments has been used as an appropriate experimental setting to look at different research questions – typically those that investigate how different negotiation tactics or environmental characteristics change audit outcomes. For instance, Wang and Tuttle (2009) investigate the impact of mandatory audit rotation on negotiation tactics, Bame-Aldred and Kida (2007) investigate the impact of the degree of flexibility in auditor and client initial negotiating positions, and Sanchez, Agoglia, and Hatfield (2007) investigate the impact of auditors' use of a reciprocity-based negotiation strategy.

Table 1 – Units of Analysis in Audit Research from Francis (2011). Adapted from: Francis (2011).

Unit	Examples
Audit Inputs	Audit tests
	Engagement team personnel
Audit Processes	Implementation of audit tests by engagement team personnel
Accounting Firms	Engagement teams work in accounting firms
	Accounting firms hire, train, and compensate auditors, and develop audit guidance (testing procedures)
	Audit reports are issued in name of accounting firms
Audit Industry and Audit Markets	Accounting firms constitute an industry
	Industry structure affects markets and economic behavior
Institutions	Institutions affect auditing and incentives for quality, e.g., State Boards of Accountancy, the AICPA, FASB, SEC, and PCAOB, as well as the broader legal system
Economic Consequences of Audit Outcomes	Audit outcomes affect clients and users of audited accounting information

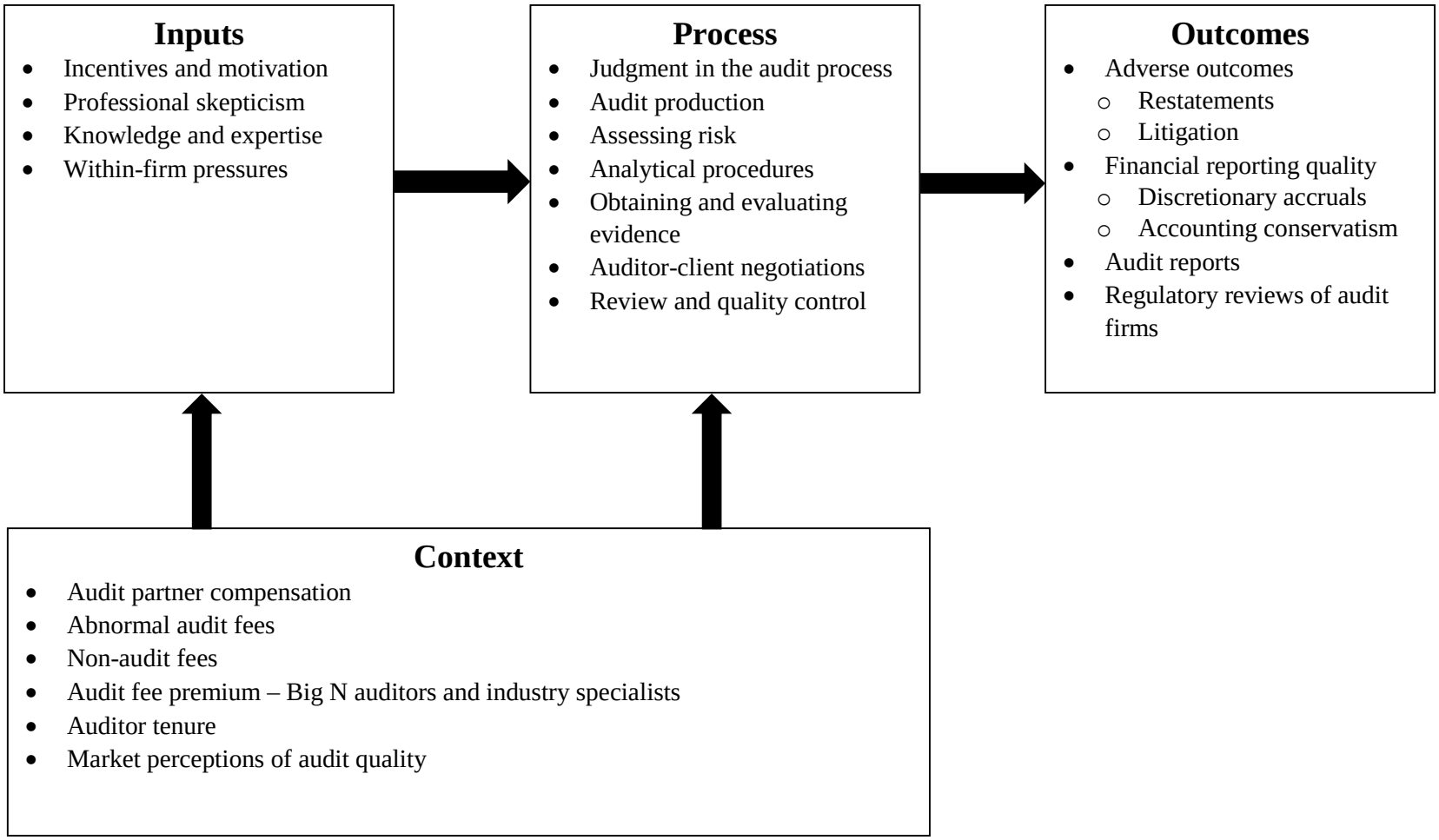

Figure 1 – Indicators of Audit Quality from Knechel et al. (2013). Adapted from: Knechel et al. (2013).

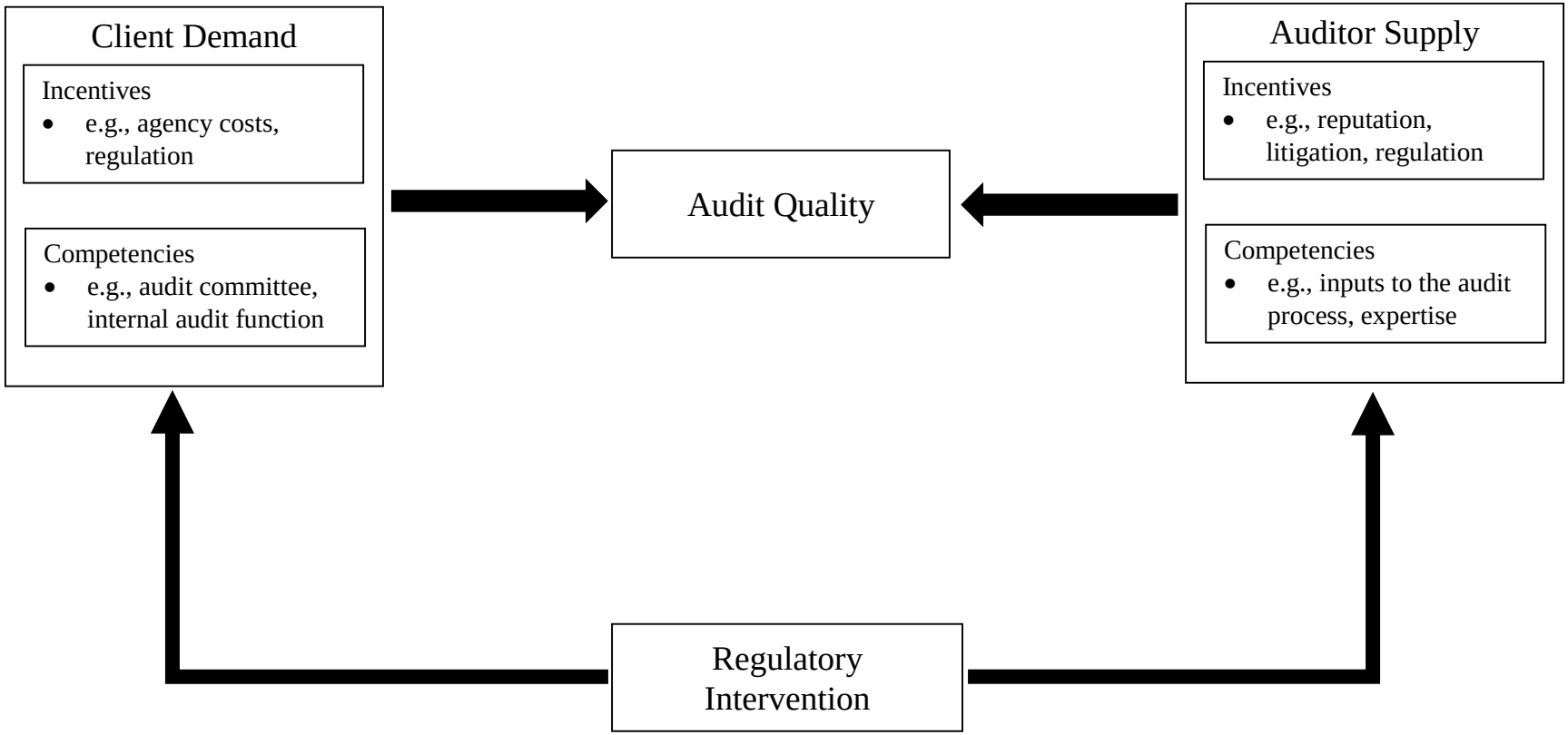

Figure 2 – Audit Quality Framework from DeFond & Zhang (2014). Adapted from: DeFond & Zhang (2014).

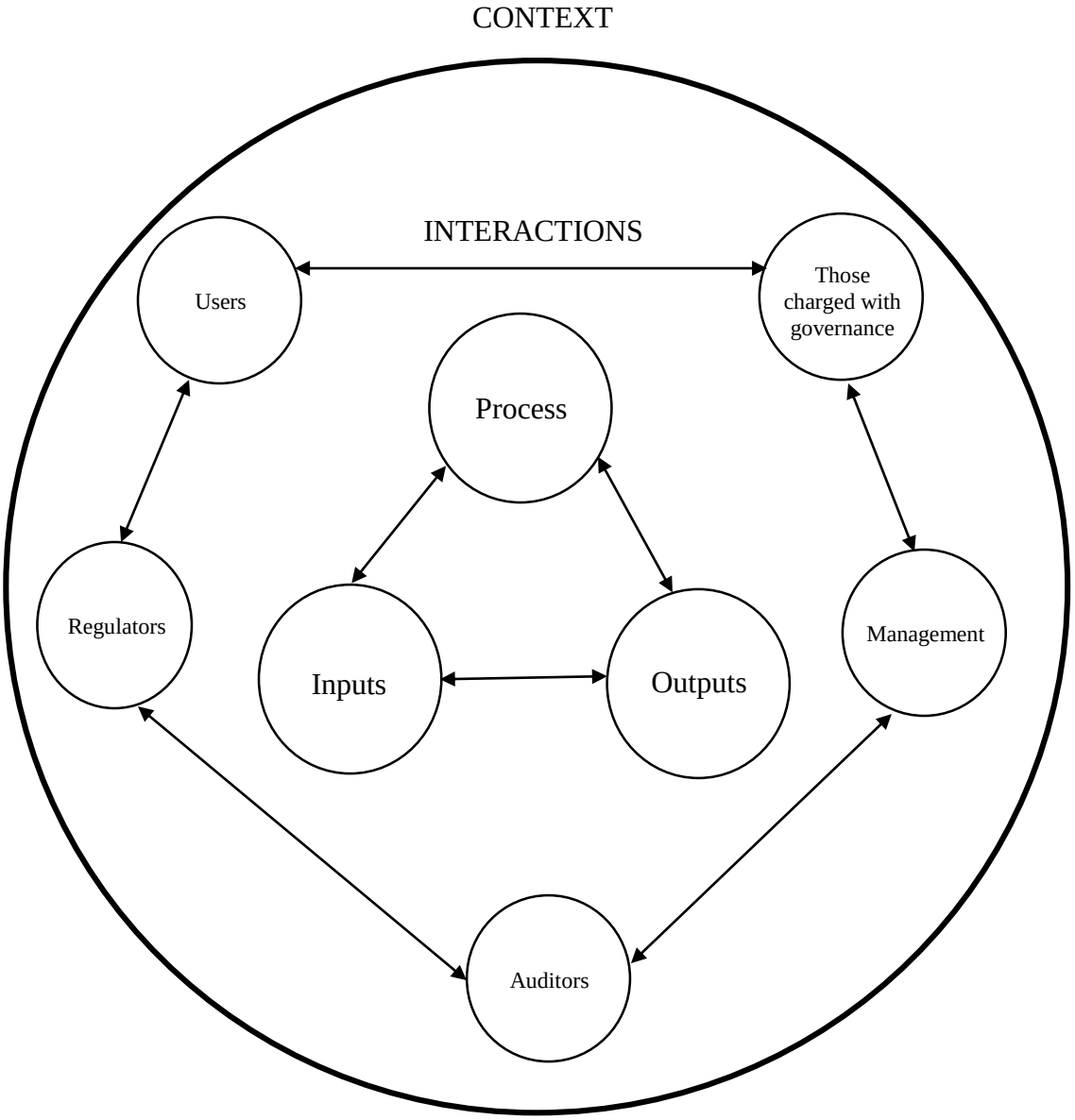

Figure 3 – IAASB Framework for Audit Quality from IAASB (2014). Adapted from: IAASB (2014).

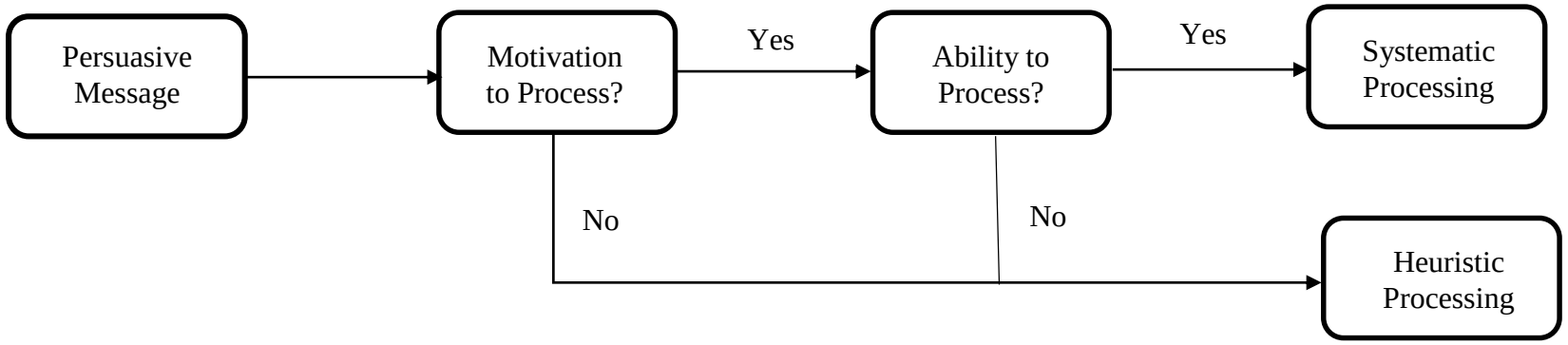

Figure 4 – The Elaboration Likelihood Model

CHAPTER 3

MANAGEMENT PERCEPTIONS OF AUDIT QUALITY: A SURVEY APPROACH

Introduction

Audit quality is a key issue faced by the audit and accounting industries, as evidenced by recent audit quality projects undertaken by the Public Company Accounting Oversight Board (PCAOB), International Auditing and Assurance Standards Board (IAASB), and the Center for Audit Quality (CAQ).[4] The European Union requires audit firms to file a public report that includes audit quality indicators, and the United States Department of Treasury has recommended that large audit firms issue a similar report (Treasury 2008). In response to this recommendation, audit firms have begun voluntarily releasing this information (EY 2014; PwC 2014). Audit quality has also been an important topic in academic research, as evidenced by the recent publication of three separate frameworks for evaluating current and future audit quality research (Francis 2011; Knechel et al. 2013; DeFond & Zhang 2014). Although each of these frameworks offers a unique perspective on audit quality, they all agree that more research is necessary

[4] The PCAOB released a strategic plan for improving the relevance and quality of the audit in 2013 (PCAOB 2013); the IAASB released an audit quality framework (IAASB 2014), and the CAQ released a set of proposed audit quality indicators (CAQ 2014).

to improve our understanding of what it is and how it can be improved.

There are also many stakeholders in the audit process who have the opportunity to influence audit quality. One key stakeholder that has been relatively overlooked is management of audit clients. Although Sarbanes-Oxley shifted much of the responsibility of and oversight for the audit to the members of the audit committee, management still plays a central role in the audit process. Cohen et al. (2010, 752) find that auditors still perceive management to be the "driving force behind auditor appointments and terminations." Additionally, management has significant interaction with auditors throughout an audit engagement and typically assumes a key coordinating role between auditor and client. Furthermore, Bennett and Hatfield (2013) show that auditor perceptions of management can influence auditor engagement decisions. Thus, understanding how management perceives audit quality can provide insight into auditor incentives and motivations, which in turn impacts actual audit quality. The purpose of this paper is to provide insight from management on their view of audit quality and to determine how their perspective relates to current audit quality frameworks.

I survey members of management[5] regarding their perceptions of audit quality and ways that auditors are able to demonstrate audit quality on an engagement. I then code those responses according to recently published audit quality frameworks in order to organize the responses and identify strengths and weaknesses of each framework. Additionally, I ask participants to rate the importance of the CAQ's Audit Quality Indicators (AQI) to provide some early feedback on the value of the AQIs.

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[5] I define management as individuals who have some responsibility over the financial reporting process for their company and/or interaction with their company's auditors. See the Research Design section for demographics of participants.

Results indicate that management participants define audit quality based primarily on personal characteristics of the auditor (e.g., independence, integrity, knowledge), process factors (e.g., efficiency and effectiveness of the audit tests), and outcomes of the audit (e.g., the final audit report and recommendations provided to management and/or the audit committee). When asked how auditors demonstrate audit quality, however, participants primarily focused on auditor characteristics and process factors, but they rarely mentioned the outcome factors. Proxies that are commonly used in academic research, such as discretionary accruals or conservatism, or outcome based measures such as litigation or restatements, were rarely mentioned by participants as either a definition or determinant of audit quality. Additionally, after comparing and contrasting several of the current audit quality frameworks, I find that some frameworks [e.g., DeFond & Zhang (2014); CAQ (2014)] may be insufficient for understanding management perspectives of audit quality.[6] Also, current academic frameworks may, to some degree, be overlooking characteristics related to interpersonal relationships between auditors despite management placing a high value on those characteristics.

I find similar results when evaluating which of the CAQ's AQIs management found to be most helpful in evaluating audit quality. The highest rated AQIs were the knowledge and experience of the audit team, the audit firm leadership and tone at the top, and the involvement of specialists in significant risk areas. Alternatively, the results of the PCAOB's inspection reports were rated as much less important for evaluating audit quality. This may be especially helpful for the CAQ, as their AQI project as currently

[6] This is not meant to imply that they are less valuable. Both frameworks have unique strengths that can provide great value in other settings.

published is meant to generate discussion on audit quality, rather than provide a final determination on the topic.

The remainder of this chapter is organized as follows. The Background and Research Question section discusses the relevant audit quality frameworks and proposes the addressed research questions. The Results reviews the research design used. The Discussion of Results section presents the analysis of the survey responses and discusses the implications of the results, and the Conclusion section provides concluding remarks, including opportunities for future research.

Background and Research Questions

Despite the importance of audit quality, there is no universally agreed upon definition of what it is or how it is measured. The most commonly cited definition of audit quality in academic research comes from DeAngelo (1981) and states that audit quality is based on the probability that an auditor will both discover and report an error in the financial statements. Although this definition works well in theory, measuring audit quality has proven to be difficult, likely due in large part to the unobservable nature of most audit processes. One way to proxy for audit quality is to use different observable outcomes, such as restatements, litigation against auditors, poor PCAOB reviews, or SEC Accounting and Auditing Enforcement Releases (AAER) (Francis 2011). Unfortunately (for the sake of research) these outcomes are relatively rare and only provide a signal for situations that occur on the very low end of an audit quality continuum. Another method used in research is to focus on characteristics of the auditors performing the work. These characteristics include: Big N versus non-Big N auditors (Teoh and Wong 1993), audit

firm industry expertise (Krishnan 2005), and auditor reliance upon fees from particular client (Chung and Kallapur 2003). DeFond and Zhang (2014) equate audit quality with financial statement quality. This premise allows audit quality to be studied through the lens of earnings quality, which often looks at discretionary and abnormal accruals (Francis et al.1999) or earnings response coefficients (Chi et al. 2009).

Although the above proxies for audit quality are appropriate for academic research that studies the outcomes associated with audit quality, they do not provide insight into actual evaluations of the audit process. Management is uniquely situated to evaluate audit processes due to their interactions on the engagement. Management perceptions of audit quality are important because they can influence auditor incentives and motivations. Carcello et al. (1992) provided the best evidence about what factors drive management perceptions of audit quality in the auditor-client relationship by surveying controllers. They find that controllers focus most heavily on personal characteristics of the auditor and relationship interactions, such as good communication, when evaluating audit quality. Unfortunately, this survey occurred over 20 years ago and much has changed in the audit profession in the intervening years.[7] Thus, there is an opportunity to provide fresh insight into management perceptions of audit quality. My first two research questions focus on how managers view audit quality, both theoretically and functionally.

- **RQ1:** How does management define audit quality?
- **RQ2:** How can auditors demonstrate audit quality on an engagement?

[7] Most notably, the passage of Sarbanes-Oxley in 2002.

Academic Frameworks

Academic research has recently developed several frameworks that may prove useful for categorizing and analyzing responses to these questions (Francis 2011; Knechel et al. 2013; DeFond & Zhang 2014). Each of these frameworks will be discussed in more detail below.

Francis (2011)

Francis (2011, 125) "presents a general framework for studying factors associated with engagement-level audit quality." Although its overall purpose is to organize current archival research, its focus on engagement-level factors makes it an appropriate and effective framework for analyzing management perceptions of audit quality because management has significant interaction with auditors during the engagement process.

This framework is organized into six units of analysis: audit inputs, audit processes, accounting firms, audit industry and audit markets, institutions, and economic consequences of audit outcomes. *Audit inputs* consist of two inputs to the audit process: the audit testing procedures and the engagement team personnel. *Audit processes* involve decisions and judgments made by the audit team related to the actual work performed on an engagement, including the audit tests selected, the evidence evaluated, and the opinion reached. *Accounting firms* deals with the impact of a firm on hiring, training, and evaluating audit personnel, as well as any firm-specific requirements that audit teams must follow. *Audit industry and audit markets* relate to the impact that the collective audit firms have on markets in general. The *institutions* category considers the impact that outside organizations, such as regulatory bodies and a country's litigation

environment, have on the conduct of an audit. Finally, *economic consequences of audit outcomes* refers to the larger institutional context under which an audit operates. See Table 1.

Knechel et al. (2013)

The goal of Knechel et al. (2013, 385) is to "review and synthesize the academic literature on audit quality and propose ideas for future research." This framework focuses on characteristics that are fundamental to an audit engagement, and it recognizes that audit quality is judged differently by the various stakeholders in the audit process. Thus, in order to better understand current research, this framework attempts to reconcile different viewpoints and "identify the fundamental characteristics" (p. 386) of audit quality.

This framework uses a balanced scorecard approach that links quality indicators (incentives, uniqueness, process, uncertainty, and professional judgment) across four categories: inputs, processes, outcomes, and context. The *inputs* category is for characteristics that relate primarily to the members of the audit team, such as independence, professional skepticism, knowledge, and expertise. The *audit processes* category relates to processes involved in the actual engagement work, such as judgment, risk assessment, auditor-client negotiations, and engagement review. The *outcomes* category is for observable outcomes of the audit, such as the financial statements, restatements, litigation, and regulatory reviews. Finally, the *context* category relates to indicators such as partner compensation, audit fees, auditor size, auditor tenure, and market perceptions of the audit. See Figure 1.

DeFond & Zhang (2014)

DeFond and Zhang (2014, 279) define audit quality as "greater assurance of high financial reporting quality." Thus, their framework is unique in the sense that it is structured around the supply and demand of audit services, and audit quality arises from factors related to auditors, their clients, and regulatory forces that influence both groups.

Client demand characteristics are separated into two categories: incentives to demand quality and competency in meeting that demand. Research on client incentives focuses on the moral hazard problem faced by companies and may look at factors such as the client's choice to hire auditors with certain characteristics (e.g., audit firm size or industry specialization). Client competencies research often focuses on corporate governance characteristics. The auditor supply category is also separated into two categories: auditor incentives for independence and auditor competency. Examples of incentives that auditors face to provide a quality audit include litigation and reputation risk. Auditor competency would include training, review processes, and experience. Finally, regulatory pressures, such as the passage of Sarbanes-Oxley, influence both client demand and auditor supply. See Figure 2.

Regulatory Frameworks

Regulatory bodies also seek to define and provide a framework for audit quality. The primary goal for these regulatory bodies is to provide a functional tool that different stakeholders in the audit process can use to evaluate and improve audit quality.

IAASB (2014)

The main objectives of the IAASB's framework include "raising awareness of the key elements of audit quality, encouraging stakeholders to explore ways to improve audit quality, and facilitating greater dialogue between key stakeholders" (IAASB 2014, 1).

This framework establishes five factors. *Input* factors include the characteristics of the auditor and are split into two subcategories: 1) values, ethics, and attitudes (e.g., objectivity, integrity, independence, and professional skepticism), and 2) knowledge, skills and experience, (e.g., judgments, understanding of the business and industry, training of audit staff, and partner involvement). *Process* factors relate to the performance of audit testwork and the quality control procedures put into place in an audit firm. Examples include compliance with auditing standards, use of information technology, and documentation. *Output* factors are the formal reports that result from an audit engagement, such as financial statements and opinions, management letters, and reports to those charged with governance. The *key interactions* factor relates to the relationships between key stakeholders in the audit process, such as auditors, management, users of the financial statements, those charged with governance, and regulators. Finally, *contextual* factors are the environmental factors that impact an audit, such as culture, litigation environment, reporting deadlines, and financial reporting frameworks. See Figure 3.

CAQ (2014)

Recently, the PCAOB initiated a project designed to "identif[y] measures for analyzing key aspects behind the quality of public company auditing…[to] provide

additional insight for audit committees, investors, and others and thus encourage audit firms to compete on the basis of audit quality" (PCAOB 2013, 1). In response to the PCAOB's call for measures that provide additional insight into audit quality (PCAOB 2013), the CAQ released a proposed list of AQIs in April 2014.

The AQIs, as devised by the CAQ, are grouped into four categories. The first category is *firm leadership and tone at the top*, and relates to how audit firm leadership establishes and communicates an attitude of high quality to employees. The second category is *engagement team knowledge, experience, and workload*, and covers areas such as the knowledge and experience of audit team personnel, the training requirements established by audit firms, the number of hours worked by audit staff, and the involvement of firm specialists. The third category is *monitoring*, and it includes audit firm internal quality reports and PCAOB inspection reports. The fourth category is *auditor reporting*, and it focuses on reissuance restatements and withdrawn audit opinions. See Table 2 for a full list of the AQIs.

These AQIs were and are intended to be a beginning point in the discussion on audit quality, and the CAQ continues to solicit feedback on their relevance, as well as encourage research in this area (CAQ 2015). As discussed earlier, management is an important stakeholder in the audit process, and their feedback on the AQIs can help to provide a more complete understanding of their value. Thus, I propose a third research question:

- **RQ3:** How does management rate the value of each of the CAQ's AQIs in determining audit quality?

Research Design

Participants

To answer these research questions, I surveyed current and former members of management. Participants were contacted by email using the accounting alumni[8] database of a large public university in the western United States. Each participant was provided with a link to an online survey administered through Qualtrics.[9] Each participant was asked three screening questions before beginning the instrument. These questions were used to identify participants who had management experience and were not currently employed by a public accounting firm. Participants who completed the instrument were offered a choice to either receive $10 in an electronic Amazon gift certificate or to donate $10 to one of four charitable organizations.[10]

The initial email list contained 3,678 unique alumni,[11] although 125 of the initial emails were returned as undeliverable. Of that group, 373 (10%) individuals opened the survey link to the experimental materials. Of those 373, 82 had inappropriate professional backgrounds, as determined by the screening questions that participants initially answered,[12] leaving 291 participants. Of these 291, another 100 exited the

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[8] The list included alumni in both the bachelors in accounting and masters of accountancy programs.

[9] The audit quality survey was administered in conjunction with an experiment on the impact of industry norms on management perceptions of audit quality, which is described in Chapter 4.

[10] Overall, 46% chose the gift card and 46% chose the charitable donation (the remaining individuals chose neither option). The four charities, and the percentage of participants who donated (out of total donating participants), are the University of Utah Business School Scholarship Fund (69%), the American Red Cross (2%), the Huntsman Cancer Institute (25%), and Habitat for Humanity (3%).

[11] Participants were also invited to forward the email to acquaintances with similar professional and educational backgrounds.

[12] Of the 82 who were eliminated based on their professional background, 46 (56%) were currently employed in public accounting and 57 (70%) lacked professional interaction with external auditors. Some individuals responded by email with a reason why they were declining to participate. The most common reason provided was a professional background in an area outside of audit or accounting (i.e., lawyer, tax CPA, financial advisor, etc.).

instrument prior to completion and were removed from the analysis, leaving 191 participant responses to evaluate.[13] Of these, 172 (90%) provided usable responses to the survey questions.

Task

Once participants reached the survey portion of the instrument, they were asked two open-ended questions:

1. Please describe what "Audit Quality" means to you.
2. Please describe way(s) that external auditors have demonstrated high audit quality. Please focus only on interactions that you have had with auditors during a time you were employed with the auditor's client.

After answering these questions, participants were shown the CAQ's AQIs and asked to rate, on a five-point Likert-style scale, how valuable information in each of these categories would be in evaluating audit quality.

Analysis

Each of the responses to the two open-ended questions was coded separately in accordance with three of the five audit quality frameworks discussed previously: Francis (2011), Knechel et al. (2013), and IAASB (2014). DeFond and Zhang (2014) and CAQ (2014) were not used because the focus of these frameworks was determined to be inconsistent with the responses. The DeFond and Zhang (2014) framework equates audit quality with financial statement quality, which increases the emphasis on management's

[13] Of the 100 participants who dropped out prior to completion, 99 dropped out during the experiment portion and never viewed the survey questions.

role in audit quality. Management responses were constrained to only two categories in the framework, which limited both differentiation of the responses and value of this framework in analyzing and understanding audit quality. The CAQ AQIs were developed to identify tangible indicators of audit quality. Intangible indicators of audit quality, such as communication with management, do not fit well in the current classification structure. Additionally, the CAQ's examples of outcome measures are limited only to negative outcomes such as restatements and PCAOB inspection failures. Thus, their framework fails to adequately account for many of management's responses (e.g., audited financial statements and management reports).

Results

RQ1 and RQ2

Responses to the two open-ended survey questions were coded separately according to the audit quality frameworks proposed by Francis (2011), Knechel et al. (2013), and IAASB (2014). Responses contained references to at least one of the classification categories.

When participants were asked to define audit quality, they most commonly provided responses that related to the conduct of the audit process itself (e.g., appropriate tests, applying reasonable judgment, and appropriate review). Many participants also mentioned the characteristics of the auditor (e.g., independence, free from bias, sufficient knowledge and training) and output characteristics (e.g., financial statements that are free from misstatement and appropriate recommendations to management and/or the audit committee). When asked to explain how auditors demonstrated audit quality in their

work, respondents were still most likely to reference personal characteristics of the auditor and process factors; conversely, the outcome measures were mentioned much less often. Full results are summarized in Tables 3-5.

RQ3

RQ3 seeks to understand how management views the CAQ's AQIs. Participants rated each AQI measure on a five-point Likert-style scale, with a score of 5 equating to an opinion that the AQI provides significant value in evaluating audit quality. Similar to results from RQ1 and RQ2, the AQI with the highest mean score[14] is the knowledge and experience AQI, which has a score of 4.48. This is also the only AQI with both a median and mode of 5. The next highest AQI scores belong to firm leadership and tone at the top (4.09, with median and mode of 4) and allocation of resources by significant risk areas (4.05, with median and mode of 4). These AQIs are related to individual auditor characteristics and audit processes, respectively, which is consistent with the results from RQ1 and RQ2. The AQI with the lowest score is the PCAOB inspection findings (3.36, median and mode of 3). Overall, fewer than 50% of respondents felt that this AQI provides either significant or large value in evaluating audit quality, and approximately 25% felt it provided either minimal value or no value at all. See Table 6 and Figure 5.

[14] Means are reported here under an assumption that the scale is functionally equivalent to an interval scale, although it is presented in an ordinal manner. I also present the median and mode for all responses.

Additional analysis

As previously noted, there is much current discussion surrounding the topic of audit quality, including multiple frameworks for evaluating audit quality. Each of these frameworks has different strengths and weaknesses, and understanding some of similarities and differences among them may be valuable for understanding when to use one or another. In order to understand how some of the frameworks are related, I performed a principal components analysis with a direct oblimin rotation on the responses to each of the two survey questions.

I first analyzed Question 1, which asked participants to provide a definition of audit quality. Although there were only 172 responses to analyze, the KMO measure is 0.571 and the null hypothesis for Bartlett's Test is rejected at $p = 0.000$. The analysis generated 6 components with eigenvalues > 1.0, although components 5 and 6 are barely above 1.0 and, due to the low sample size and use of binary data, may not provide as much insight. Component 1 (with loadings) is Auditor Characteristics, and it includes K1[15] (0.902), F2 (0.900), I1 (0.864), and I4 (0.377). The lower loading for I4 actually highlights one strength of the IAASB framework, as there is a separate category for interactions between stakeholders in the audit process. Many participants highlighted the important role of auditor communication, but that role was combined with general auditor characteristics in the other frameworks. Component 2 includes I2 (-0.827), F3 (-0.755), and K2 (-0.732). This is the Process component, and relates to the importance of different engagement processes, such as audit tests and supervisor review. Component 3 is Firm Characteristics, and it includes K4 (0.805) and F6 (0.786). The absence of any

[15] Category definitions are provided in Table 7.

factors from the IAASB framework highlights another of its unique characteristics. The IAASB looks at each of its categories at an engagement, firm, and national level; thus, firm characteristics that are separately categorized in the academic frameworks are included throughout the other categories in the IAASB framework. Thus, the correlations with the other factors are too low for any one of the IAASB factors to load on this component. Component 4 is the Output component and includes K3 (0.847) and I3 (0.786). Interestingly, there is no category from the Francis (2011) framework included in the Output component. This framework does not readily accommodate audit reports, since F6 focuses on the impact of firm reputation (e.g., Big 4 versus non Big 4) on an audit report's quality and F10 focuses on the economic consequences of the report (e.g., reduced cost of capital), but none of the factors focuses primarily on the audit report itself.

Question 2 asked participants to describe how auditors had demonstrated audit quality in prior engagements. The KMO measure for the analysis is only 0.485, and though the null for Bartlett's test is rejected at $p = 0.000$, the low KMO measure indicates the following analysis should be interpreted carefully. The analysis revealed 6 components with eigenvalues > 1.0. Component 1 (with loadings) is again Auditor Characteristics and includes I1 (0.892), K1 (0.878) and F2 (0.682). Component 2 is Process with I2 (0.870), F3 (0.810), and K2 (0.741). The Output component includes I3 (0.841) and F10 (0.768). Even though K3 is grouped into Component 5, it also loads fairly well on Component 3 (0.418). See Tables 8 and 9 for the correlations between the variables and Tables 10 and 11 for the pattern matrices.

Discussion of Results

Overall, management appears to focus most on auditor characteristics, the audit process, and outcomes from the audit when evaluating audit quality. Interestingly, there are differences in how management responds to the questions "What does audit quality mean?" and "How do auditors demonstrate audit quality?" When defining audit quality, management places a greater reliance on outcomes of the audit, such as the audit report itself and auditor suggestions to management on process and control improvements. These outcomes are much less frequently cited when management is asked how auditors demonstrate audit quality, which suggests that management evaluations of audit quality are more likely to be developed either before an engagement starts (through knowledge of auditor characteristics) or throughout the engagement (through interaction with and observation of audit processes) than at the completion of audit work (through an evaluation of the final work product). This discrepancy may arise in part from the fact that a large majority of audit opinions are unqualified and thus provide no great differentiation for purposes of evaluation. This is important for auditors to understand, however, since they have an incentive to demonstrate audit quality to management throughout the engagement in order to help retain clients for future audit engagements.

Conversely, academic audit quality frameworks place greater importance on the impact of the audit industry, regulatory forces, litigation influences, and other contextual factors than does management. These factors may have a real impact on auditors and auditor decision-making in other settings, but that influence is not recognized and/or prioritized by management.

I find a similar pattern of results when evaluating management responses to the

CAQ's AQIs. Respondents rate an auditor's knowledge and training as being extremely important in evaluating audit quality. Firm tone at the top and the allocation of resources to significant risk areas are rated only slightly less. At the other end of the spectrum, knowledge of the PCAOB inspection findings are rated as much less important. PCAOB inspection reports are similar to audit opinions in that most reports do not document any issues and thus the typical report may not provide enough differentiation to be valuable in evaluating audit quality. Again, auditors need to be aware that the biggest impact on perceptions of audit quality typically occur before and during an audit engagement, and they are judged least by the outcome of the audit.[16]

One area in which the IAASB differs from the other frameworks is in including a category devoted to interactions between the different stakeholders of the audit process. This appears to be an important category, as many respondents cited their relationship with the auditors as important for evaluating audit quality. Academic frameworks may not pay enough attention to the relationship side of audit quality, and this might be an area in which future research can provide valuable insights. Additionally, Francis (2011) categorizes the hiring and training of employees under the firm category, rather than the input category, which implies that he views certain internal traits that auditors bring to an engagement as being the responsibility of the firms, rather than the individual auditor.

Although the audit process categories in the different frameworks are significantly correlated, the size of the relationship is smaller than might be expected. Despite each framework referencing the audit process, the frameworks highlight different areas.

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[16] Management may have different opinions on the importance of an outcome if the audit opinion is something other than unqualified.

Specifically, Francis (2011) breaks down the audit process into the audit tests that are used and the implementation of those tests, including auditor judgment, risk assessment, and audit review. Neither Knechel et al. (2012) nor the IAASB breaks down the audit process into any component parts.

I also considered using the DeFond and Zhang (2014) audit quality framework and the CAQ's AQIs as audit frameworks and using them to analyze responses; however, I deemed each of them as inappropriate for this task. The DeFond and Zhang (2014) framework focuses on the relationship between audit quality and financial statement quality due to the shared roles of auditors and management in developing the financial statements. Thus, their framework has three main categories based on the role of different stakeholders in the audit process: management (e.g., their demand for high quality), auditors (e.g., their incentive to provide high quality), and regulators, who influence both management and auditors. Due to the broader focus on their audit quality framework, responses to the survey questions would almost all end up classified in the auditor incentive category, which removed nearly all of the variation and would have provided few insights into management perceptions of audit quality.

Similarly, the CAQ's AQIs have a different focus that made them less useful for classification of responses. The CAQ developed their AQIs in an attempt to identify areas in which auditors could provide tangible evidence to client audit committees of the quality provided by engagement teams. While this is a worthy goal, many of the responses cannot be classified in this manner. For instance, management personnel valued auditors who exercise strong communication skills during an engagement. Another problem with classifying responses using this framework is that the AQIs ignore

the role of the final financial statements, as their outcome measures include only PCAOB inspection reports and internal audit quality reports. The CAQ may want to consider adding additional outcome measures to their list of AQIs.

Conclusion

In this paper, I investigate management perceptions of audit quality: both how management defines audit quality and how auditors demonstrate quality on their engagements. I also measure management's perceptions of the value of the CAQ's AQIs, which were released in 2014 as a starting point for greater understanding of indicators of audit quality. I find that, when focusing on defining audit quality, management focuses on characteristics of the auditor and the audit process, as well as on the outcomes of the audit such as the financial statements and auditor process improvement recommendations. When asked how auditors demonstrate audit quality, however, management focuses most heavily on just the auditor and audit process characteristics. Similarly, the AQIs that are rated as most important for evaluating audit quality were the knowledge and training of audit staff and the audit firm leadership and tone at the top. Management rates the outcome of the PCAOB's inspection reports as the least important indicator.

I contribute to the audit quality literature by providing insight into management perceptions of audit quality. Management is a key stakeholder in the audit process and has a significant influence on the auditor hiring and firing decision; thus, their perception of audit quality may play a significant role in auditor incentives. I evaluate their perceptions of audit quality through the lens of various audit quality frameworks,

including Francis (2011), Knechel et al. (2012), and IAASB (2014). I also provide some of the first feedback on the CAQ's AQIs by asking management the importance of each of the AQIs in evaluating audit quality. Finally, I identify similarities and differences in the audit quality frameworks and identify some areas where there is a disconnect between current frameworks and management perceptions in terms of the importance of certain audit quality proxies (e.g., outcomes of audits and financial statement quality). Future research may focus on identifying methods of improving either actual audit quality or the manner in which auditors convey the message of quality to management in order to improve audit processes and relationships with clients.

A

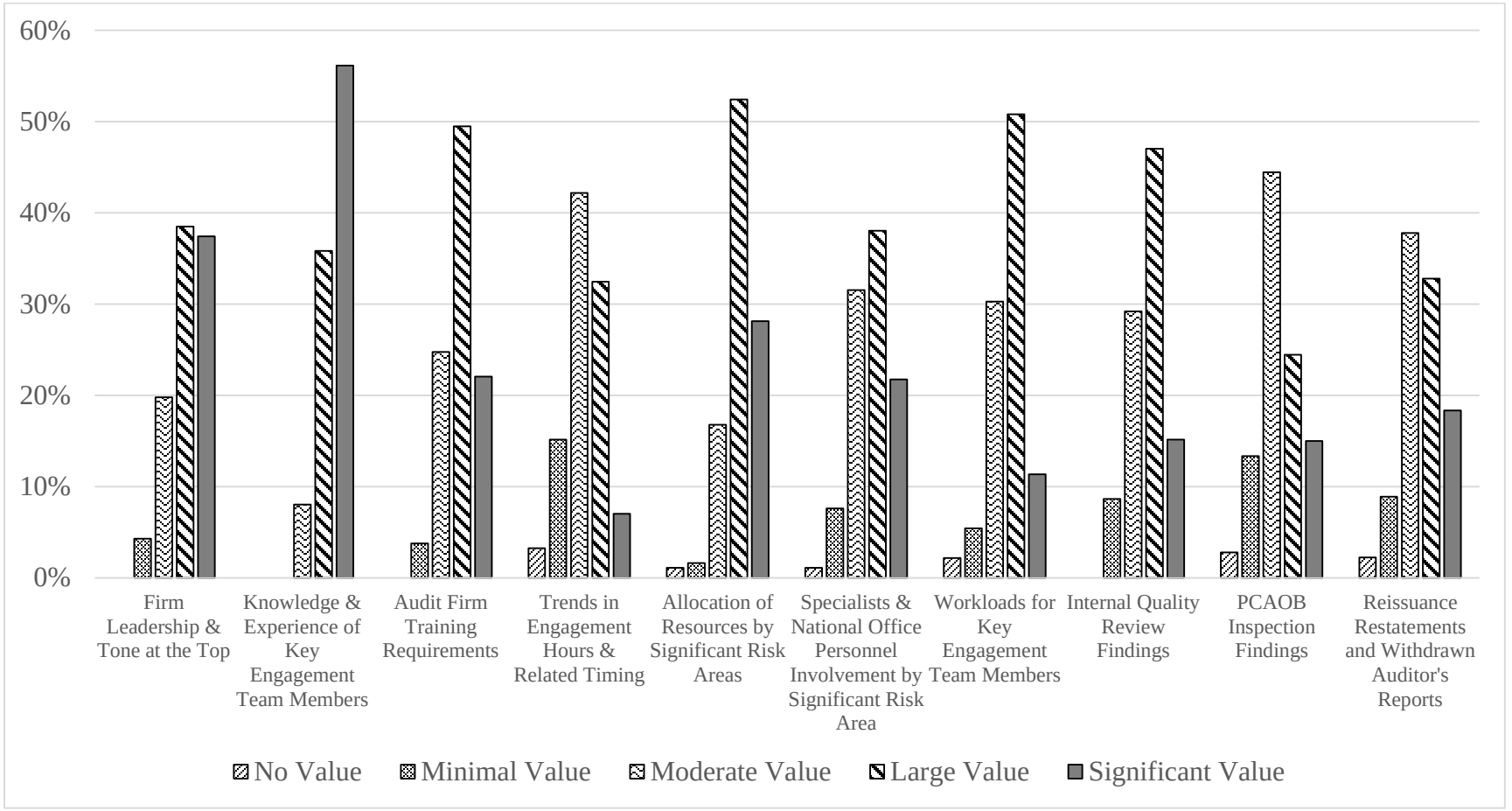

Figure 5 – Management Responses to the Importance of the CAQ's Audit Quality Indicators. A) Full Responses B) Condensed Responses

B

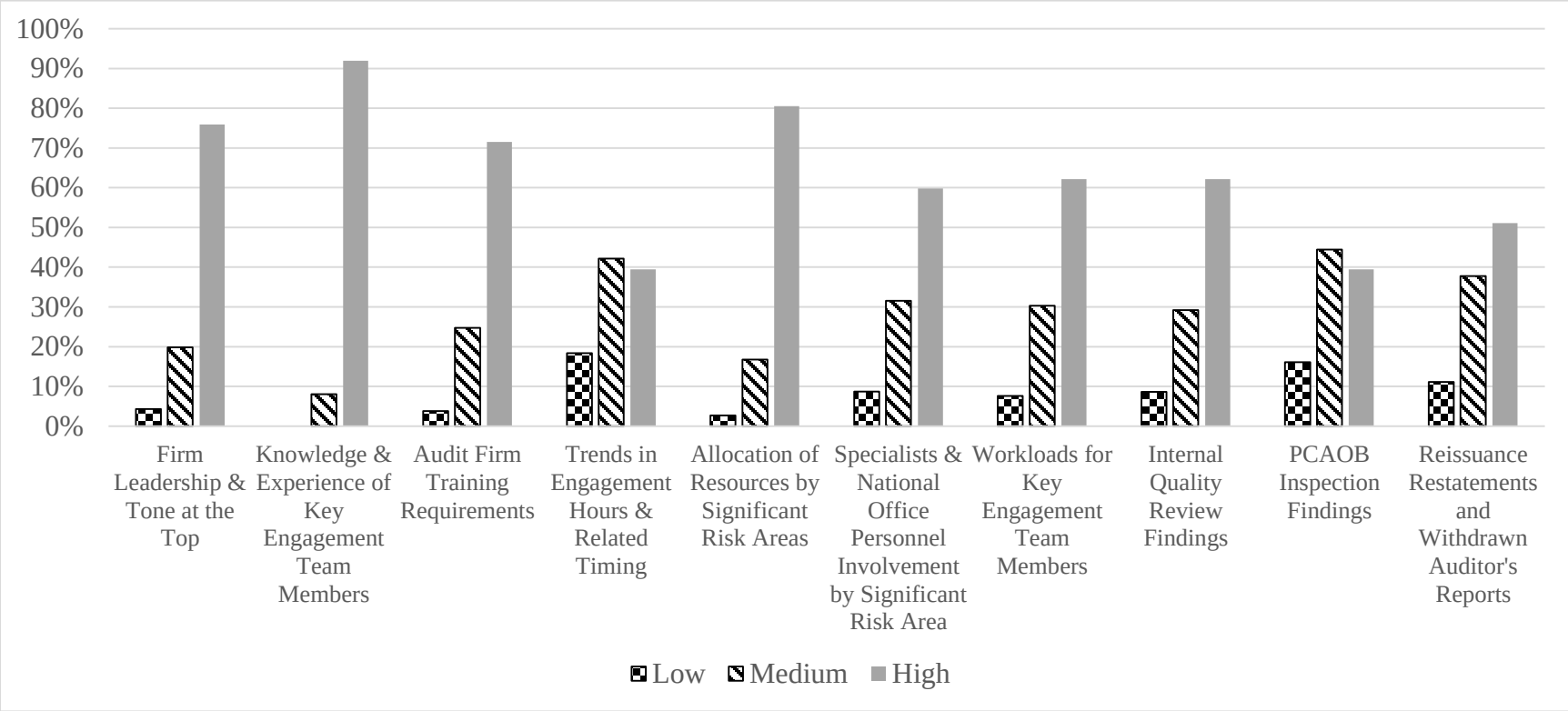

Figure 5 Continued

Table 2 – CAQ's Audit Quality Indicators

Audit Quality Indicator	Quantitative and Qualitative Information
Firm Leadership & Tone at the Top	
	Communication with audit committee could include: - Discussion of firm transparency or audit quality reports - Discussion of firm training programs - Discussion of implementation of prior inspection report findings
Engagement Team Knowledge, Experience, and Workload	
Knowledge & experience of key engagement team members	Years on the engagement Years of relevant industry experience Years with the audit firm Years at present level of seniority
Audit firm training requirements	Firm training requirements, including industry-specific training, with a focus on engagement team members
Trends in engagement hours and related timing	Hours for engagement team members for current and prior year Changes in planned hours Hours by different phases of the audit
Allocation of resources by significant risk area	Planned allocation of audit hours to significant risk areas Discussion of how and why certain areas are deemed significant risk areas Discussion of changes to significant risk areas from prior years
Specialists and national office personnel involvement by significant risk area	Number of hours on engagement to be used by specialists Fees paid to outside specialist
Key engagement team members' workloads	Current year projection of hours compared to prior year total hours Expectation of workload amounts for each level Distribution of hours during critical audit periods

Table 2 Continued

Audit Quality Indicator	Quantitative and Qualitative Information
Monitoring	
Internal quality review findings	Nature of findings Response to findings Remediation planned or enacted
PCAOB inspection reports	Nature of findings Response to findings Remediation planned or enacted Number of engagements inspected
Auditor Reporting	
Reissuance restatements and withdrawn auditor's reports	Firm-level trends of restatements or withdrawal of ICFR reports Commonalities in reissuances or withdrawn ICFR reports

Table 3: Summary of Results to Open-Ended Questions for Francis (2011)

		Q1	%	Q2	%	Total *	%
Audit Inputs	*Audit Tests*	6	4%	8	5%	13	8%
	Engagement Team Personnel	83	49%	106	62%	134	78%
Audit Processes	*Implementation of tests*	120	70%	91	53%	138	81%
Accounting Firms	*Teams work in firms*	0	0%	1	1%	1	1%
	Firms hire, train, compensate, and develop guidance	4	2%	4	2%	7	4%
	Reports are issued in firm's name	2	1%	0	0%	2	1%
Audit Industries and Markets	*Accounting firms are an industry*	0	0%	0	0%	0	0%
	Industry structure affects market and economic behavior	0	0%	0	0%	0	0%
Institutions	*Institutions affect auditing and incentives*	0	0%	0	0%	0	0%
Economic Consequences of Audit Outcomes	*Outcomes affect clients and users*	24	14%	20	12%	38	22%

Q1: Please describe what "Audit Quality" means to you.

Q2: Please describe way(s) that external auditors have demonstrated high audit quality. Please focus only on interactions that you have had with auditors during a time you were employed with the auditor's client.

***** The Total column does not equal the sum of the columns for Q1 and Q2 because participants may have referenced the category for both questions. The Total column indicates the total number of participants who referenced the category in at least one of their responses.

Table 4: Summary of Results to Open-Ended Questions for Knechel et al. (2013)

	Q1	%	Q2	%	Total	%
Input	70	41%	63	37%	100	58%
Audit Process	97	57%	119	70%	147	86%
Outcomes	74	43%	16	9%	83	49%
Context	4	2%	0	0%	4	2%

Q1: Please describe what "Audit Quality" means to you.

Q2: Please describe way(s) that external auditors have demonstrated high audit quality. Please focus only on interactions that you have had with auditors during a time you were employed with the auditor's client.

***** The Total column does not equal the sum of the columns for Q1 and Q2 because participants may have referenced the category for both questions. The Total column indicates the total number of participants who referenced the category in at least one of their responses.

Table 5: Summary of Results to Open-Ended Questions for IAASB (2014)

	Q1	%	Q2	%	Total	%
Inputs	82	48%	76	44%	119	70%
Process	87	51%	81	47%	122	71%
Output	77	45%	29	17%	93	54%
Interactions	25	15%	44	26%	58	34%
Context	8	5%	5	3%	12	7%

Q1: Please describe what "Audit Quality" means to you.

Q2: Please describe way(s) that external auditors have demonstrated high audit quality. Please focus only on interactions that you have had with auditors during a time you were employed with the auditor's client.

***** The Total column does not equal the sum of the columns for Q1 and Q2 because participants may have referenced the category for both questions. The Total column indicates the total number of participants who referenced the category in at least one of their responses.

Table 6: Summary of Responses to the CAQ's Audit Quality Indicators

	Mean	Median	Mode
Knowledge & Experience of Key Engagement Team Members	4.48	5	5
Firm Leadership & Tone at the Top	4.09	4	4
Allocation of Resources by Significant Risk Areas	4.05	4	4
Internal Quality Review Findings	3.96	4	4
Audit Firm Training Requirements	3.90	4	4
Specialists & National Office Personnel Involvement by Significant Risk Area	3.72	4	4
Workloads for Key Engagement Team Members	3.64	4	4
Reissuance Restatements and Withdrawn Auditor's Reports	3.56	4	3
PCAOB Inspection Findings	3.36	3	3
Trends in Engagement Hours & Related Timing	3.25	3	3

Survey question: *The Center for Audit Quality recently identified several potential indicators of audit quality. Please rate how valuable knowledge of the information contained in each of the following categories would be for evaluating audit quality*.

1 = No value
2 = Minimal value
3 = Moderate value
4 = Large value
5 = Significant value

Table 7 – Glossary of Framework Categories

Francis (2011)

F1	Audit tests
F2	Engagement team personnel
F3	Implementation of audit tests by engagement team personnel
F4	Engagement teams work in accounting firms
F5	Accounting firms hire, train, and compensate auditors, and develop audit guidance (testing procedures)
F6	Audit reports are issued in name of accounting firms
F7	Accounting firms constitute an industry
F8	Industry structure affects markets and economic behavior
F9	Institutions affect auditing and incentives for quality (e.g. State boards, AICPA, FASB, SEC, PCAOB, legal system)
F10	Audit outcomes affect clients and users of audited accounting information

Knechel et al. (2013)

K1	Inputs
K2	Audit process
K3	Outcomes
K4	Context

IAASB (2014)

I1	Input
I2	Process
I3	Output
I4	Key interactions
I5	Contextual factors

Table 8 – Correlations between Audit Quality Framework Categories for Survey Question #1

	F1	F2	F3	F5	F6	F10	K1	K2	K3	K4	I1	I2	I3	I4	I5
F1	1	.000 1.000	-.037 .634	-.029 .702	-.021 .788	.101 .186	-.093 .225	**.165*** **.030**	-.037 .628	-.029 .702	.009 .908	**.186*** **.015**	.020 .794	.011 .881	-.042 .584
F2		1	**-.175*** **.022**	.000 1.000	.000 1.000	-.016 .830	**.710**** **.000**	**.188*** **.014**	**-.258**** **.001**	.000 1.000	**.745**** **.000**	.116 .129	**-.246**** **.001**	**.346**** **.000**	.110 .149
F3			1	.000 1.000	-.063 .414	**-.181*** **.018**	**-.178*** **.020**	**.231**** **.002**	**.285**** **.000**	-.089 .245	-.094 .220	**.403**** **.000**	**.169*** **.027**	-.029 .710	.000 1.000
F5				1	-.017 .827	.046 .551	**.186*** **.014**	.056 .464	-.056 .464	-.024 .757	**.162*** **.034**	.074 .337	.016 .833	.046 .551	-.034 .657
F6					1	.109 .154	.021 .789	.094 .219	.015 .842	**.343**** **.000**	.114 .138	-.111 .147	.120 .115	.109 .154	-.024 .755
F10						1	-.107 .164	.092 .231	.108 .158	**.265**** **.000**	-.063 .409	-.026 .734	**.325**** **.000**	**.158*** **.039**	-.013 .868
K1							1	.051 .510	**-.314**** **.000**	-.049 .521	**.773**** **.000**	.004 .954	**-.294**** **.000**	**.162*** **.034**	**.154*** **.043**
K2								1	**-.383**** **.000**	.056 .464	**.195*** **.011**	**.561**** **.000**	**-.210**** **.006**	**.292**** **.000**	.136 .075
K3									1	-.056 .464	**-.336**** **.000**	**-.232**** **.002**	**.587**** **.000**	-.025 .743	-.136 .075
K4										1	.084 .271	-.004 .963	.094 .221	**.155*** **.042**	-.034 .657
I1											1	.071 .355	**-.227**** **.003**	.069 .370	.121 .114
I2												1	**-.290**** **.000**	.007 .928	.105 .169
I3													1	-.006 .934	**-.199**** **.009**
I4														1	.066 .393
I5															1

Table 9 – Correlations between Audit Quality Framework Categories for Survey Question #2

	F1	F2	F3	F4	F5	F10	K1	K2	K3	I1	I2	I3	I4	I5
F1	1	**-.176***	.037	-.017	-.034	.092	-.111	.147	.024	-.030	**.179***	.122	-.129	-.038
		.021	.627	.826	.657	.229	.149	.054	.752	.699	**.019**	.112	.090	.619
F2		1	.050	-.101	.117	**-.176***	**.528****	**.198****	.036	**.555****	.016	-.077	**.335****	.132
			.515	.189	.125	**.021**	**.000**	**.009**	.642	**.000**	.833	.318	**.000**	.085
F3			1	-.083	.065	-.066	.071	**.396****	**.175***	**.186***	**.636****	-.052	.032	.021
				.279	.398	.390	.354	**.000**	**.022**	**.015**	**.000**	.495	.674	.789
F4				1	-.012	-.028	-.058	.051	-.024	-.068	.081	-.034	-.045	-.013
					.878	.718	.449	.506	.750	.375	.291	.654	.559	.863
F5					1	-.056	.043	-.064	-.049	.096	.086	-.069	.086	-.027
						.466	.577	.403	.520	.212	.260	.365	.260	.728
F10						1	-.088	.124	.071	-.140	-.052	**.466****	-.088	**.153***
							.253	.104	.354	.067	.502	**.000**	.251	**.045**
K1							1	-.041	.006	**.660****	-.040	-.052	.024	.084
								.589	.940	**.000**	.599	.496	.750	.274
K2								1	-.133	.061	**.453****	.132	**.189***	.041
									.082	.424	**.000**	.083	**.013**	.598
K3									1	-.003	.019	**.337****	.087	-.055
										.971	.808	**.000**	.254	.470
I1										1	.028	-.088	-.146	.125
											.712	.251	.056	.103
I2											1	**-.176***	-.099	-.025
												.021	.195	.749
I3												1	-.050	-.078
													.511	.310
I4													1	.057
														.456
I5														1

Table 10 – Pattern Matrix for Principal Components Analysis for Survey Question #1

	Component					
Category	**1**	**2**	**3**	**4**	**5**	**6**
K1	0.902	0.110	(0.080)	(0.091)	(0.130)	(0.100)
F2	0.900	0.014	(0.093)	0.015	0.081	0.123
I1	0.864	(0.023)	0.053	(0.100)	(0.083)	(0.170)
I4	0.377	(0.145)	0.176	0.269	0.291	0.351
I2	(0.051)	(0.827)	(0.059)	(0.202)	0.089	(0.057)
F3	(0.106)	(0.755)	(0.097)	0.460	(0.353)	(0.038)
K2	0.072	(0.732)	0.186	(0.212)	0.240	0.083
K4	(0.082)	(0.010)	0.805	(0.077)	0.048	(0.014)
F6	(0.005)	(0.008)	0.786	0.004	(0.151)	(0.041)
K3	(0.111)	0.080	(0.137)	0.847	(0.074)	0.006
I3	(0.079)	0.101	0.090	0.786	0.156	(0.156)
F1	(0.086)	(0.124)	(0.261)	(0.093)	0.718	(0.094)
F10	(0.008)	0.091	0.278	0.230	0.638	(0.023)
F5	0.252	(0.152)	0.038	0.009	0.017	(0.761)
I5	0.122	(0.110)	(0.036)	(0.120)	(0.109)	0.537

Table 11 – Pattern Matrix for Principal Components Analysis for Survey Question #2

	Component					
Category	**1**	**2**	**3**	**4**	**5**	**6**
I1	0.914	0.070	(0.043)	(0.212)	0.039	(0.023)
K1	0.878	(0.063)	0.005	(0.048)	0.003	0.019
F2	0.682	0.088	(0.009)	0.433	0.080	(0.057)
I2	(0.033)	0.870	(0.190)	(0.148)	(0.055)	0.035
F3	0.110	0.810	(0.036)	(0.020)	(0.194)	(0.126)
K2	(0.015)	0.741	0.181	0.244	0.278	0.163
I3	0.006	(0.057)	0.848	(0.001)	(0.222)	0.044
F10	(0.108)	(0.022)	0.747	(0.108)	0.279	(0.003)
I4	(0.150)	0.087	0.036	0.910	0.026	(0.111)
F1	(0.105)	0.253	0.197	(0.430)	0.055	(0.095)
K3	0.106	0.055	0.456	0.146	(0.718)	(0.014)
I5	0.157	(0.008)	0.152	0.089	0.640	(0.029)
F4	(0.016)	0.090	(0.183)	0.042	(0.082)	0.872

CHAPTER 4

EXAMINING THE IMPACT OF INDUSTRY NORMS ON MANAGEMENT PERCEPTIONS OF AUDIT QUALITY UNDER IMPRECISE ACCOUNTING GUIDANCE

Introduction

An auditor's work on any particular engagement will be evaluated by several different groups. Each of these groups may have their own definition of audit quality, and these definitions are unlikely to be identical. For example, an auditor tasked with determining the appropriateness of a client's accounting position may consider how the decision would be perceived by members of management and the audit committee, the Public Company Oversight Board (PCAOB), and/or jurors in a potential lawsuit. In this scenario, auditors have competing incentives because losing clients over accounting disagreements, receiving poor inspection reports, or incurring lawsuits and/or having restatements can each negatively impact an auditor's professional career. Thus, understanding how different groups evaluate auditor decisions improves our understanding of auditor motivations and incentives. I begin to explore this area by investigating how auditors' use of industry norms[17] impacts management[18] perceptions of

[17] Specifically, financial reporting norms.

[18] For purposes of this project, I define management as anyone in a company who has oversight of

audit quality when accounting standards are imprecise.

Understanding how auditor decisions impact management perceptions of audit quality is important due to the integral role that management fills in both the day-to-day function of an engagement[19] and the year-to-year decision to hire and fire an auditor. Bennett and Hatfield (2013) show that day-to-day engagement decisions can be influenced by perceptions of the auditor-management relationship; therefore, auditors who develop a good working relationship with management are likely to be able to operate the engagement more effectively and efficiently. Additionally, despite the requirement in Sarbanes-Oxley that audit committees are to be in charge of hiring and firing auditors, many auditors still perceive management to be the "driving force behind auditor appointments and terminations" (Cohen et al. 2010, 752). Thus, auditors are incentivized to remain aware of how their decisions on an audit engagement are perceived by management.

An auditor's use of industry norms and the level of precision in the accounting standards are two intertwined factors that may impact management perceptions of audit quality. Business is too complex for every possible transaction to be explicitly specified, so accounting standards often have some degree of imprecision in order to allow them to be generalized across a wider range of circumstances. At times, auditors and management disagree about how best to apply imprecise accounting guidance to specific transactions. As precision decreases, auditors are less likely to be able to take a strong

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at least a portion of the financial reporting process and interaction with the external audit team. Specific job titles may include, but are not limited to, CEO, CFO, VP of Finance, Director of Financial Reporting, Controller, and Accounting Manager.

[19] A member of management is typically responsible for coordinating the engagement with the audit team. This responsibility may include tasks such as preparing and/or collecting requested documentation, introducing members of the audit team to key company personnel, and resolving issues that arise over the course of an engagement, including auditor proposed adjustments to the financial statements.

position based solely on available guidance. When auditors have a reduced ability to use professional standards as a basis for their recommendations, they may instead choose to base their decision on some alternative source of credibility. An auditor's choice of alternative source can provide a signal of quality (or lack thereof) to management. One alternative source that may be available to auditors is the presence of an industry norm, and its use as a justification method for a decision can provide additional clarity and credibility when the accounting standards are imprecise.

Although using industry norms can be helpful in determining appropriate accounting treatment for transactions, auditors should be cautious about using industry norms as a default position. An auditor's use of professional judgment should always dictate when an industry norm is, or is not, appropriate for an individual client. For example, in 2005 approximately 270 companies, mostly in the retail and restaurant chain industry, restated their financial statements due to similarly inappropriate lease accounting (Rapoport 2005). The restatements began when CKE Industries discovered an error and restated their financial statements, which caused other companies in the industry to examine their lease accounting practices more closely. Ultimately the SEC issued a letter clarifying the appropriate accounting treatment, which led to a flurry of restatements. Hyatt and Reed (2007) conclude that most of these companies were operating in good faith; however, the lack of attention given to the lease accounting requirements resulted in an unwanted restatement for many companies. Although any of these restating companies could have performed the same review of their financial policies that CKE Industries performed, the presence of an established industry norm, and the sense of comfort that comes from being similar to peers, likely contributed to the

misinterpretation of the accounting standard.

Unfortunately, auditors may have significant incentives to use industry norms as a default response when accounting standards are imprecise (referred to as herding behavior). Kadous and Mercer (2012) find that, when accounting standards are imprecise, jurors view audit quality as being higher and are less likely to find auditors negligent when auditors' decisions are consistent with industry norms. This perception of higher audit quality exists even when the actual quality of the auditor's decision is lower. The threat of litigation is very real to accounting firms, and if the safe harbor protections identified by Kadous and Mercer (2012) are strong enough, auditors may view industry norms as pseudo-authoritative guidance and use them as a substitute for their own professional judgment.

On the other hand, the existing litigation incentives to default to industry norms, the percentage of total audits that result in a trial before a jury is so low that jurors are the group that is **least** likely to evaluate an auditor's work (Palmrose 1988). Therefore, the threat of litigation may provide an insufficient incentive for auditors to actively engage in herding behavior because jurors are not the only group that evaluates auditor decisions. In order to fully understand the incentives for auditors' use of industry norms, we must also understand how other groups evaluate their use. As previously discussed, auditors are likely to be motivated by management's perceptions. If management perceives an auditor's use of industry norms in a manner similar to that of jurors, then auditors have an increased incentive to default to the use of industry norms, especially when accounting standards are imprecise. If, however, management evaluates audit work based on other criteria, then the incentive to default to industry norms is at worst reduced and at best

fully mitigated.

Understanding the impact of industry norms on management perceptions of audit quality is an important current issue in the auditing and accounting community. The United States continues to move towards a more principles-based accounting framework, which is likely to decrease the level of precision in the accounting standards and may subsequently lead to increased incentives for auditors to use industry norms as a substitute for professional judgment. If these incentives are strong enough, one of the main advantages of a principles-based framework – the flexibility to use appropriate professional judgment in the application of the standard – may be eliminated. On the other hand, the PCAOB is currently determining whether to officially incorporate an auditor's consideration of industry norms when evaluating accounting estimates and fair value measurements (PCAOB 2014). This research will help to inform the debate about the appropriate use for industry norms.

I use the Elaboration Likelihood Model (ELM) as developed by Petty and Cacioppo (1986) to inform my predictions about how management will evaluate an auditor's use of industry norms. The ELM states that people process persuasive communications through either a central or a peripheral route. Processing through the central route is more systematic and effortful; thus, it requires a higher level of ability and motivation. If motivation and/or ability are lacking, processing will occur through the peripheral route, which is characterized by the use of heuristics and is subject to a greater influence of bias. Management is likely to be both sufficiently motivated have the requisite ability to engage in systematic processing when evaluating auditor decisions. Therefore, I predict that management perceptions of audit quality will not be driven by an

auditor's use of industry norms as a justification method. Rather, I expect that management evaluations of audit quality will be based on an evaluation of the underlying accounting attributes[20] of auditor decisions. I do expect that decreasing the precision in the standards will increase management's reliance on the auditor's justification method, but not to the extent that its effect will override the impact of the underlying accounting attributes.

In order to test my research question, I perform an experiment that utilizes an audit adjustment setting. I manipulate three variables: Justification Method (Professional judgment, Industry norms), Precision (Less, More), and Accounting Attributes (Conservative, Aggressive). Participants consist of current and former members of management (i.e., controllers, financial directors, CFOs, etc.). All participants have professional experience that includes oversight of at least a portion of the financial reporting process and/or interaction with external auditors. Participants are asked to assume the role of a controller in a fictional company that operates under either United States Generally Accepted Accounting Principles (U.S. GAAP) or International Financial Reporting Standards (IFRS). Each participant evaluates proposed audit adjustments related to the allowance for doubtful accounts and the classification of leases. Participants rate their perception of audit quality and the likelihood of recording the adjustment.

I find evidence that management considers industry norms to be a higher quality

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[20] I define underlying accounting attributes as the core features of a transaction that determine how it should be recorded in the financial statements. For example, the underlying attributes of a lease transaction would include the lease term, economic life of the asset, lease payments, and existence of a purchase option.

justification method than professional judgment; however, when accounting standards are more precise, management's evaluation of audit quality is based on underlying accounting attributes rather than on the justification method used. I also find that as precision in the accounting standards decreases, management views audit quality as being higher when an auditor justifies a decision using industry norms. Therefore, when precision is low, auditors are incentivized to engage in herding behavior.

This study contributes to the accounting literature by providing important insight into the impact of the United States' convergence with international standards. I demonstrate that, as accounting standards become less precise, auditors may be incentivized to use industry norms as a substitute for the guidance that would previously have been included in the accounting standard. Lawmakers, regulators, and standard setters need to be aware of this incentive in order to consider the potential impact on audit quality of allowing an industry to informally develop accounting guidance. Audit quality may increase if appropriate industry norms are developed and used consistently; conversely, audit quality may decrease if auditors attempt to inappropriately fit a transaction to a norm rather than using professional judgment to determine a better treatment.

The remainder of this paper is as follows. In the next section I review the background literature and develop the hypotheses. I then describe the research design, followed by a discussion of the results of my analysis and concluding remarks, including limitations of this study and opportunities for future research.

Background and Hypothesis Development

Arnold Schilder, chairman of the International Auditing and Assurance Standards Board (IAASB), said "Different stakeholders are likely to have different views about what audit quality is and how it can be enhanced" (IAASB 2011, p. 2). One stakeholder in the audit process is client management, and their perceptions of auditors can and do have a real impact on auditor behavior. For example, Bennett and Hatfield (2012) find that auditors who are socially mismatched with client management are more likely to reduce the amount of audit evidence collected and/or are more likely to use vague or inappropriate documentation.[21] Also, Wang and Tuttle (2009) find evidence suggesting that auditors who operate under a mandatory client rotation setting change their negotiation strategies during the final year of the audit relationship when the auditor no longer needs to worry about client retention.

Despite the importance of understanding the impact that management perceptions have on audit quality, very little research has investigated the factors that influence these perceptions. Carcello et al. (1992) presented controllers with a list of potential audit quality indicators and found the following factors to be rated as the most important indicators of audit quality: responsiveness to client needs, compliance with general audit standards, CPA firm executive involvement, maintenance of a skeptical attitude, and degree of individual responsibility. Although these factors were perceived to be most important, several arguably relate more to service quality than audit quality. Additionally, while these factors may be helpful for creating and maintaining a certain

[21] Vague and inappropriate documentation can indirectly affect audit quality by impairing an audit reviewer's ability to fully understand the procedures performed and the evidence collected, which in turn may prevent an adequate review from being completed.

type of culture in audit firms, they are less insightful for understanding how management perceives audit quality related to specific auditor decisions. Understanding how specific audit decisions impact management perceptions is important for understanding auditor incentives and is an underexplored area of accounting research

On the other hand, accounting *litigation* research has investigated how specific auditor decisions impact perceptions of audit quality for juror and judge participants. Lowe et al. (2002) find that jurors attribute less blame to auditors when they follow the recommendations of a firm decision aid, and Kadous and Mercer (2012) find that jurors perceive audit quality to be higher when auditors' decisions are consistent with an industry norm. This research would suggest that, when available, auditors are incentivized to use firm decision aids and industry norms in order to reduce litigation risk. No prior accounting literature has investigated the impact of these types of auditor decisions on management perceptions of audit quality. If management perceptions of audit quality are affected in a manner similar to that of jurors, then auditor incentives for these behaviors are magnified. Alternatively, if management perceives these decisions differently than jurors, then auditor incentives for their use may be reduced. In order to more fully understand the incentives faced by auditors, we must also understand the impact of auditor decisions on management perceptions of audit quality.[22]

[22] Jurors and management do not constitute the whole population of groups that evaluate audit quality. A complete understanding of auditor incentives would include any additional evaluator groups, such as audit committees and regulators.

The Elaboration Likelihood Model

The ELM, as developed by Petty and Cacioppo (1986), provides a framework for understanding how management may evaluate auditor decisions. The ELM suggests that persuasive messages[23] are evaluated along either a central route or a peripheral route. The central route is used for systematic processing, which is more thoughtful and effortful, while the peripheral route is characterized by heuristic processing, and relies more on external cues and mental shortcuts. In order to exert the extra effort required to engage in systematic processing, individuals must have both motivation and ability (collectively termed elaboration). If either of these characteristics is missing, individuals are more likely to use the less effortful heuristic processing. Using heuristic processing can lead to lower quality decisions; thus, it is important to determine if management has both the motivation and the ability to engage in systematic processing when evaluating auditor decisions. See Figure 4.

Motivation

Prior research in psychology suggests that management is likely to have sufficient motivation to engage in systematic processing. Petty et al. (1995) find that the most common determinant of motivation is the personal relevance of the message. As relevance increases, individuals are more likely to process a message systematically (Chaiken 1980; Petty, Cacioppo, & Goldman 1981). Auditor decisions should have a strong personal relevance for management for at least a few reasons. Auditors and

[23] In this experiment, I consider the persuasive message to be some signal of audit quality that the auditor desires to send to management. To operationalize the persuasive message, I utilize an audit adjustment setting. This is discussed more fully in the Research Design section of this chapter.

management have been described as co-creators of the financial statements (Salterio 2012; see also Antle & Nalebuff 1991), and most auditor-management interactions occur within this context. Despite this shared role, management has ultimate responsibility over the preparation of the financial statements. Sarbanes-Oxley also requires both the CEO and CFO of publicly traded companies to certify their financial statements (SOX 2002). Additionally, portions of management compensation, such as bonuses and stock options, are often dependent on the annual financial outcomes of a company. Thus, I expect management to have sufficient motivation to evaluate auditor decisions systematically and that this motivation level is independent of auditor decisions.

Ability

Prior research suggests that management should usually, but may not always, have the appropriate level of ability[24] to systematically process decisions. Based on a review of prior literature, I separate the determinants of ability into three general categories. Internal characteristics are those that relate to the individual tasked with processing a message. Examples of internal characteristics include technical ability and/or knowledge (Wood et al. 1985) and cognitive depletion (Sanbonmatsu & Kardes 1988). Environmental characteristics relate to conditions that are external to the individual, and include distraction (Festinger & Maccoby 1964) and level of relaxation/comfort (Petty et al. 1983). Message characteristics relate to the persuasive message, and include the incomprehensibility/ambiguity (Ratneshwar & Chaiken 1991),

[24] In this paper, the term "ability" is used in the technical context of the ELM, and not in the more common manner that would most closely align with the internal characteristics category described in this paragraph.

complexity (Cacioppo & Petty 1989), and delivery speed (Moore et al. 1986) of the message.

Although factors in each of these categories may affect management's ability to process systematically, auditors are unlikely to have much of an influence on the internal or environmental characteristics. The internal characteristic that likely has the largest impact on ability is management's level of technical knowledge and experience. Technical knowledge and experience is developed primarily through management's education and professional experiences, and every company will require some baseline requirement for an individual to even be considered for a management position. This baseline level is assumed to be high enough to understand the relevant accounting and financial reporting issues that a company faces; thus, members of management are assumed to have appropriate internal characteristics. Environmental characteristics, such as distraction or level of relaxation, are most likely influenced by professional relationships, work responsibilities, and other factors that originate from the work environment. Although the auditor may occasionally have some influence over environmental characteristics by strategically choosing the time and manner that they present management with evaluation opportunities, this influence is likely to be less important than other factors.

Auditors may be able to exert some influence over the message characteristics because much of the audit information that management evaluates is delivered or provided by the audit team. Examples of message characteristics that have been studied in prior accounting literature include the use of electronic versus face-to-face

communication (Bennett & Hatfield 2012)[25] and the use of a reciprocity-based negotiation strategy when presenting a client with audit adjustments (Sanchez et al. 2007). An auditor's use of industry norms may also affect the message characteristics of a persuasive message by strengthening the credibility of that message and providing a basis of comparability with peer companies. Additionally, the use of industry norms can be a protection against potential future litigation, as Kadous and Mercer (2012) show that jurors view audit quality as being higher when auditors justify a decision using an industry norm.

Despite the potential incentives to use industry norms as a default choice on all engagements, auditors are expected to use their professional judgment at all stages of an audit (AICPA 1972). Although using an industry norm as an additional piece of evidence would not be inappropriate, an auditor is expected to base a decision about the appropriateness of an accounting transaction primarily on the underlying accounting attributes of the transaction. Thus, when there is sufficient accounting information available, an industry norm should provide little to no additional information in determining the appropriate accounting treatment for a transaction. Rather, the use of an industry norm as a primary evaluative tool would likely indicate the use of some heuristic processing, and members of management have been shown to be susceptible to heuristic processing under certain circumstances (Burton et al. 2012). Thus, management may view an auditor's use of industry norms in a manner similar to that of jurors, which would

[25] This study does not investigate how these different communication methods impact management perceptions or actions, but it does find that auditors gather more evidence using email communication when they perceive a social mismatch with management. Thus, this study provides evidence that the method of communicating a message can have a real impact on audit outcomes.

increase the incentive for auditors to use industry norms as pseudo-authoritative guidance and/or as a substitute for professional judgment.

My first hypothesis is set up as a research design construct to show that management views industry norms as a more credible justification method than an auditor's professional judgment alone. Absent additional information,[26] management could rationally expect that a decision justified using an industry norm is more credible than one justified using professional judgment, as the industry norm would have the additional implicit approval of a larger number of qualified individuals. H1 is stated as follows:

- **H1:** Management will perceive industry norms as a more credible justification method than an auditor's professional judgment when the justification method is the only evaluative information that they are provided.

My second hypothesis focuses on decision evaluations that are more consistent with realistic auditor-client relationships. Although I expect industry norms to be rated more positively when evaluated independently of additional accounting information, management would rarely, if ever, evaluate an audit decision under these conditions. Rather, management would either already have, or would request of the auditors, the additional information needed to fully understand an auditor's decision. Thus, in practical situations, I expect that management will have both the appropriate

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[26] In the context of the ELM, the lack of information could be interpreted in two ways. First, the auditor may be processing along the heuristic path because the lack of provided information prevents management from having the ability to process systematically. Alternatively, management may be processing systematically and evaluating the only piece of available information in the most rational manner possible. As this hypothesis is for research design purposes only, and the type of processing used in this scenario is not central to the research question, I do not predict or make an attempt to measure which of the two explanations applies.

motivation and ability to engage in systematic processing, and the auditor's choice of justification method will subsequently have no noticeable impact on management's evaluation of audit quality. Instead, when evaluating an auditor's decision, management's evaluation will be based on the quality of the auditor's interpretation of the underlying accounting attributes. The industry norm would be more of a heuristic device, and management's choice to place lower reliance in an industry norm would be consistent with prior research that finds that auditors are less likely to be affected by heuristics and biases as they perform more realistic tasks (Smith & Kida 1991). I expect that members of management, who are likely to have related backgrounds and abilities to auditors, would behave similarly by evaluating auditors based on the quality of their interpretation of a transaction's underlying attributes. Thus, my next two hypotheses are stated as follows:

- **H2a:** When management evaluates an audit decision, management perceptions of audit quality will be influenced by the underlying accounting attributes.
- **H2b:** When management evaluates an audit decision, management perceptions of audit quality will not be influenced by the auditor's justification method.

As discussed previously, ambiguity is another message characteristic that may impact an individual's ability to process systematically. The lack of precision in accounting standards may have a similar impact as ambiguity when management evaluates an auditor decision. Some imprecision has always been present in accounting standards. For example, Accounting Standard Codification (ASC) 450, which deals with

contingencies, states that loss contingencies are evaluated by determining whether a loss is "probable" and can be "reasonably estimated." Neither of these criteria provides concrete guidance; rather, each requires some level of professional judgment. Understanding the impact of imprecision in accounting standards is an especially important topic in the current accounting environment due to the United States' convergence with international accounting standards. Rules-based standards are generally considered to contain more bright-line tests and concrete implementation guidance, whereas principles-based standards rely more on overarching principles (Schipper 2003). Thus, the structure of principles-based standards is typically less precise than rules-based standards.

Differences in an accounting framework can change management behaviors, as Jamal and Tan (2010) show that managers are more likely to make aggressive decisions when their company operates under a principles-based standard and their auditors have a rules-based mindset. I expect that decreased precision in the standards increases management's use of heuristic processing when evaluating auditor decisions. The increase in heuristic processing would likewise increase management's reliance on the auditor's justification method as an evaluative tool. Thus, as precision in the accounting standards decreases, the external credibility (lack of external credibility) that is invoked by the auditor's use of industry norms (professional judgment) is likely to increase (decrease) management's perception of audit quality. My third hypothesis is stated as follows:

- **H3:** In situations of lower precision, management will rate audit quality higher (lower) when auditors justify a decision using industry norms

(professional judgment) as compared to situations of higher precision.

Research Design

Participants

Participants were recruited using the accounting alumni database of a large research university in the western United States. The initial email list contained 3,678 unique alumni, although potential candidates were invited to forward the request to acquaintances with similar educational and/or professional backgrounds. From that group, 125 email requests were returned as undeliverable. Initially, 373 (10%) potential candidates responded to the request for participation by opening the link to the experimental materials.[27] Once participants opened the link, they were asked a series of three screening questions designed to ensure they had a professional background that included management experience and were not currently employed as an external auditor. Of the 373 responses, 82 were eliminated based on their professional background,[28] leaving 291 participants that had the appropriate professional background. Of these 291, another 99 exited the instrument prior to completing the manipulation checks and were removed from the analysis, leaving 192 participant responses to evaluate. Participants also answered a range of demographic questions, including gender, age, educational background, audit experience, and professional experience. There were no significant

[27] The experimental materials were administered through Qualtrics.

[28] Of the 82 who were eliminated based on their professional background, 46 (56%) were currently employed in public accounting and 57 (70%) lacked professional interaction with external auditors. Additionally, instead of opening the instrument link and being screened out of participation, some respondents responded by email with a reason why they were declining to participate. The most common reason provided was a professional background in an area outside of audit or accounting (i.e., lawyer, tax CPA, financial advisor, etc.).

differences between the participants in the cells for any of the demographic characteristics. See Table 12 for participant demographics.

Experimental Setting

One common area of auditor interaction with management is the adjustment process. As auditors perform their testwork, they are likely to encounter transactions that they believe are accounted for improperly. These transactions may result from clear-cut mistakes (e.g., invoices entered at an incorrect amount), differences in opinion about estimates (e.g., the client's method for calculating the allowance for doubtful accounts), or disagreements about the appropriate interpretation of imprecise accounting standards (e.g., the classification of an investment as Level 2 or Level 3). The use of the adjustment process as an experimental setting is most commonly used in the negotiation literature (see Salterio 2012 for a review of this stream of literature). The negotiation process begins with an auditor's discovery of the possible need for an adjustment to the financial statement and concludes with one of the following actions: 1) management declines to record the adjustment and the auditor determines that this decision will not have a material impact on the financial statements,[29] 2) management agrees to record the transaction, 3) management and the auditor find a compromise solution that satisfies both parties,[30] or 4) management and the auditor are unable to agree on an acceptable solution

[29] All proposed audit adjustments that management declines to record are reported to the audit committee, typically as part of the management letter. These passed audit adjustments are also included in the management representation letter.

[30] Compromises in this process often involve management agreeing to record a lesser amount that, in the opinion of the auditor, reduces the misstatement to an acceptable level. For instance, management may be willing to record all known misstatements from a sample of revenue transactions but choose not to record the projected misstatement or sampling error amounts that are included in the total proposed adjustment amount.

and the audit committee becomes involved.[31]

The adjustment process provides an ideal setting to test my research question for several reasons. It utilizes a situation that is common to the auditor-management relationship and introduces a persuasive message (i.e., the proposed adjustment) for management to evaluate. Additionally, when auditors present an adjustment, they will likely have to provide greater than normal transparency into the audit process in an attempt to convince management the adjustment is necessary. This increased transparency provides additional data points for management to use in their evaluation. Finally, the adjustment process creates a situation in which auditors and management are, at least initially, in a conflicting position, which can help to generate a level of motivation for participants that is sufficient for systematic processing.

Task

There are two related scenarios in the experimental task. In both scenarios participants imagine themselves in the role of a controller for their company and are asked to evaluate a proposed adjustment made by the company's auditors.

Scenario 1

Scenario 1 of the experimental task is designed to test H1 by measuring a baseline perception of the use of industry norms as a justification method. Participants are told that the auditor has proposed an audit adjustment over the allowance for doubtful accounts. Other than a generic overview, participants are not provided with the details

[31] In rare circumstances, the auditor and client representatives may not be able to reach an agreement and the auditor would be forced to alter their financial statement opinion accordingly.

related to the company's calculation for the allowance, nor do the auditors provide any explanation for their proposed adjustment beyond a reliance on one of the justification methods (professional judgment or industry norms). See the Appendix for the manipulations.

Independent variables. I employ a 2x1 between subjects design. My between subjects variable is Justification Method (Professional judgment, Industry norms).

Dependent variable. Participants are asked to rate the likelihood that the auditor's proposed adjustment is correct.

Scenario 2

Following the completion of Scenario 1, participants are provided with a short training on lease classification that is tailored to either ASC 840 (for rules-based participants) or International Accounting Standard (IAS) 17 (for principles-based participants). The primary distinction between ASC 840 and IAS 17 relates to the specificity of the criteria for determining a capital lease.[32] ASC 840 lists four criteria that, should any be met, automatically require a lease to be classified as an operating lease. IAS 17 states instead that a lease must be classified as a capital lease if the lease substantially transfers the risks and rewards of ownership to the lessee. IAS 17 provides examples of criteria that may indicate this transfer has occurred,[33] but none of these criteria are an automatic trigger for a capital lease classification. Similar to Agoglia et al.

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[32] In IAS 17 this type of lease is referred to as a finance lease rather than a capital lease. In the experimental materials I use the term "finance lease" for participants in the principles-based setting. For purposes of clarity, I use the term "capital lease" throughout this paper to refer to nonoperating leases under both ASC 840 and IAS 17.

[33] The criteria in IAS 17 mirror the criteria in ASC 840.

(2011), I focus on criteria related to the lease term. Under ASC 840 (IAS 17), any lease with a term that is greater than 75% (for the major part) of the useful life of the asset must (may need to) be classified as a capital lease. The differences between these frameworks should cause the principles-based standard to be perceived as being less precise than the rules-based standard. See the Appendix for the manipulations.

Participants are then instructed that they are acting in the role of controller for their company, which manufactures medical devices such as X-rays and MRI scanners. The company is publicly traded on either the New York or London Stock Exchange. The company is in the middle of their annual audit and the audit manager is meeting with the controller to provide an update. As part of the update, the auditor presents the controller with three proposed adjustments. Participants are told that for the first two adjustments, they agree with one and disagree with the other. These first two adjustments are included to reinforce the perspective that proposed audit adjustments may be either correct or incorrect.

Following the introduction of the first two adjustments, participants are provided with the details of significant operating leases that the company entered into during the year. The leases are structured to be for 62% of the useful life, but contain a renewal option that is either 10% or 30% of the current market rental value at the time of renewal. The renewal options, if exercised, would increase the lease term to 76% of the useful life. The auditor disagrees with the company's classification and is proposing an adjustment to classify the leases as capital leases. The auditor provides several reasons why the adjustment needs to be made and justifies these reasons using either professional

judgment or industry norms.[34] See the Appendix for the manipulations.

Finally, participants are asked to respond to the dependent variable questions, as well as questions designed to test the effectiveness of the manipulations and to gather demographic information. At the conclusion of the instrument, participants are given an option to receive either a $10 Amazon.com gift card or to have a donation of $10 made on their behalf to one of several charitable organizations.[35]

Independent variables. Scenario 2 uses a 2 x 2 x 2 between subjects design. The variables are Justification Method (Professional judgment, Industry norms), Precision (More, Less) and Accounting Attributes (Conservative, Aggressive). Participants are randomly assigned to one of the eight cell conditions.

Dependent variables. I collect responses for several dependent variables that measure the impact of the manipulations on participants' perception of the auditors and audit quality. Participants are asked to rate their level of agreement with the auditor's decision to require the change in lease classification, their level of satisfaction with the audit service provided, and their recommendation for engaging the same audit firm for future audit engagements. Additionally, I ask them to determine whether or not they are likely to record the adjustment (Yes/No). Also, since participants may assess an individual auditor and the audit firm differently, I ask for a recommendation for engaging the same audit firm if there was a guarantee that a new manager would be assigned to the

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[34] The auditors in Scenario 1 and 2 use the same justification method for all participants.

[35] Of the 192 participants analyzed, 10 (5%) ended participation at some point between completing the manipulation checks and selecting a form of payment. Another 6 (3%) chose not to receive a payment or make a donation. An equal number of participants [88 (46%)] selected the Amazon gift card and the donation option. In an attempt to increase participation, one of the charitable organizations listed was the general business school scholarship fund of the participant's alma mater. Among the participants who chose to make a donation, 70% chose to donate to the scholarship fund and the remaining 30% chose 1 of the other 3 listed charitable organizations.

audit. See Figure 6 for a timeline of the experiment.

Results

Pilot Testing

Although the experimental materials are similar to Agoglia et al. (2011), pilot testing was conducted to ensure the new manipulations were well understood and effective. The initial round of pilot testing involved reviewing the materials with individuals in the auditing and accounting industry: one partner at an international accounting firm who has extensive experience in classifying leases, one international controller for a private company, and one manager at a local CPA firm. These individuals reviewed the experimental materials to ensure the setting was realistic, the terminology was not company- or firm-specific, and none of the materials was unnecessarily dense or difficult to understand. Additionally, to ensure my Accounting Attributes manipulation was effective, I asked several partners of large, international accounting firms what discount would indicate that a renewal option is a bargain. The responses ranged from 15-25%; thus my manipulations of 10% and 30% appear to be appropriate.

The second pilot group consisted of senior-level college students who were enrolled in an auditing class. Although this group had limited practical experience in auditing and accounting, their technical knowledge was advanced enough to allow them to understand the accounting issues in the two scenarios. This group assisted in testing the effectiveness of the manipulations of the materials.

A final pilot group consisted of Amazon Mechanical Turk workers and was used

to verify the effectiveness of the manipulations after several changes were made based on prior pilot testing. Results from all pilot tests indicated that the materials were understandable to those in the target demographic, and the manipulations appeared to be effective.

Manipulation Check Results

I included several manipulation checks within the postexperimental questions. I asked the participants what accounting framework was used by the company, what justification method was used by the auditors, the lease classification criteria that triggered the capital lease classification, and the percentage discount of the renewal option. Greater than 90% of the participants responded correctly to each question. Additionally, I asked each participant to rate the inherent flexibility of the accounting framework, and participants rated the principles-based standard as significantly more flexible [$F(1,190) = 3.61$, $p = 0.030$, one-tailed].

Main Results

H1 predicts that when management evaluates an audit decision based only on the justification method, an auditor's use of industry norms will be seen as more credible than the use of professional judgment. In order to test H1, I performed an ANCOVA analysis using the likelihood that the auditor is correct as the DV. I find that the overall model is significant at $p = 0.000$ with $R^2 = 0.10$. Auditors who use industry norms are perceived as more likely to be correct at $F(1,188) = 13.04$, $p=0.000$. Since individuals with prior experience as an external auditor may evaluate auditors differently than those

without that same experience, I include this variable as a control and find that it is a significant covariate at F (1,188) = 6.11, p = 0.014. Also, as part of the manipulation checks, I asked participants to rate the credibility of the auditor's rationale for the lease adjustment.[36] I find that participants rate industry norms to be significantly more credible (p = 0.022, one-tailed) than professional judgment. Based on these results, I find support for H1. See Table 13 for a summary of results for H1.

H2a and H2b predict that when management is able to evaluate audit decisions in a more realistic setting, management will focus on the accounting attributes of the auditor's decision rather than the justification method. To test these hypotheses, I perform two ANCOVA analyses: one with the likelihood that the auditor is correct as the DV and one with audit quality as the DV. When using the likelihood that the auditor is correct, I find that the model is significant at p = 0.004 with $R^2 = 0.088$. As expected, the auditor's justification method is not significant at F (1,185) = 0.70, p = 0.404, but the accounting attribute variable is moderately significant at F (1,185) = 2.31, p = 0.066 (one-tailed). Experience as an external auditor is included in the model as a control for the same reason discussed above. I also include years of professional work experience as a control variable, since participants with more overall experience are likely to have more knowledge and experience to draw upon when evaluating auditors. I find that prior experience as an external auditor and years of professional experience[37] are significant covariates (p = 0.007 and p = 0.009, respectively).

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[36] Although I asked specifically about the credibility of the auditor's rationale for the lease adjustment, the justification method used in Scenario 1 and Scenario 2 was identical for all participants.

[37] I also measured participants' self-reported level of familiarity with U.S. GAAP, IFRS, and lease accounting. None of these was found to be significant covariates with the DVs and were thus left out of the reported model. Their inclusion in the model does not have a significant impact on the reported findings.

I find even stronger results when using audit quality as the DV. This model is significant at p = 0.003 with $R^2 = 0.093$. The auditor's justification method is still insignificant at F (1,185) = 0.77, p = 0.382. The accounting attributes IV, however, is significant at F (1,185) = 4.06, p = 0.023 (one-tailed). Both prior experience as an external auditor and years of professional work experience are significant covariates (p = 0.006 and p = 0.015, respectively). These results support H2a and H2b and provide evidence that management focuses on underlying accounting attributes, rather than an auditor's justification method, when evaluating audit quality. See Figure 7 and Table 14 for a summary of results for H2.

H3 predicts that, when accounting standards are less precise, management will rate audit quality higher when auditors justify a decision using industry norms. To test this hypothesis, I use a similar ANCOVA model as used to test H2, but I also include the precision variable and its interactions with the other treatment variables. When using likelihood of the auditor's decision being correct as the DV, I do not find the interaction between justification method and precision to be significant (p = 0.564). I do find a significant interactive effect when I use audit quality as the DV at F (1,181) = 2.90, p = 0.045 (one-tailed). I also split the responses based on participants' perceptions of the flexibility in the accounting standards and, using only participants that rated flexibility in the accounting standards as high, find similar results. In order to understand the interaction effect, I analyzed only the responses for participants in the lower precision setting. I run an ANCOVA analysis and find an auditor's use of industry norms has a significantly positive effect on perceptions of audit quality at F (1,83) = 3.14, p = 0.040 (one-tailed). The accounting attributes variable does not have a significant impact (p =

0.442). These results indicate that as the accounting standards decrease in precision, management begins to rely on the justification method to determine audit quality. See Figure 8 and Tables 15 and 16 for a summary of results for H3.

Conclusion

This study makes several contributions to the accounting literature. First, I find evidence that, although management perceives industry norms to be a more highly credible justification method than professional judgment, they will evaluate audit quality based upon the underlying accounting attributes and not the justification method when precision in the accounting standards is high. On the other hand, as precision in the accounting standards decreases, management evaluates an audit decision as higher quality if the auditor justifies the decision using industry norms. These findings contribute to our understanding of how auditor decisions impact management perceptions of audit quality, which helps to better understand auditor incentives. I also show that auditors have an increased incentive to default to the use of industry norms when accounting standards become less precise, which informs the current discussion in the United States regarding the convergence with international accounting standards.

The main limitation to this study relates to the demographics of the participants and their familiarity (or lack thereof) with IFRS. Participants in this study were more familiar with U.S. GAAP, and their unfamiliarity with IFRS may change how they evaluate audit quality in this scenario. The possibility remains that participants are more likely to use heuristic processing in the imprecise setting because they lack the same frame of reference as participants in the more precise setting. On the other hand, as the

United States converges with IFRS, a certain learning curve is to be expected as existing standards are adjusted and new standards are adopted. These findings are still informative for the transition phase even if the effects become less pronounced as management gains experience in a more principles-based framework.

Future research in this area may focus on recruiting participants that are familiar with IFRS to see if the results hold with more familiarity with that framework. There are also other evaluators of audit quality, such as audit committee members, peer reviewers, and investors, that may impact audit decisions, and understanding their perceptions of audit quality will provide further insight into auditor incentives. Additionally, other factors, such as increased cognitive load, method of communication, or level of distraction, may inhibit an evaluator's ability to process systematically and may have an effect even when accounting standards are more precise. Finally, other justification methods, such as the use of firm decision aids or judgment frameworks, may have a differential impact on perceptions of audit quality.

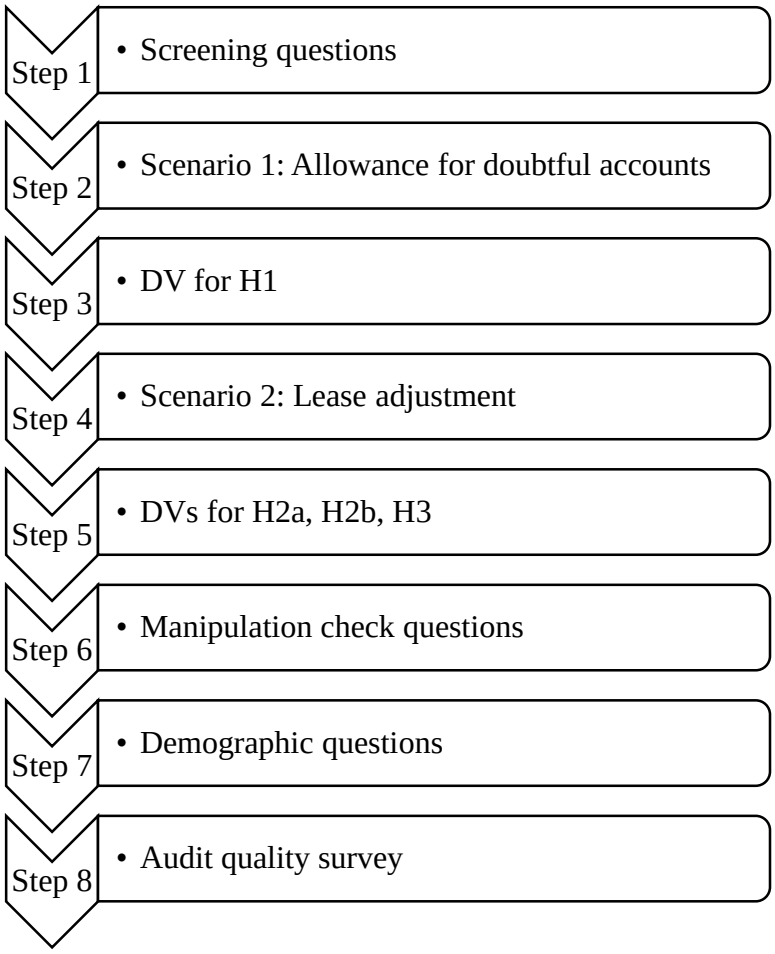


Figure 6 – Experiment Outline

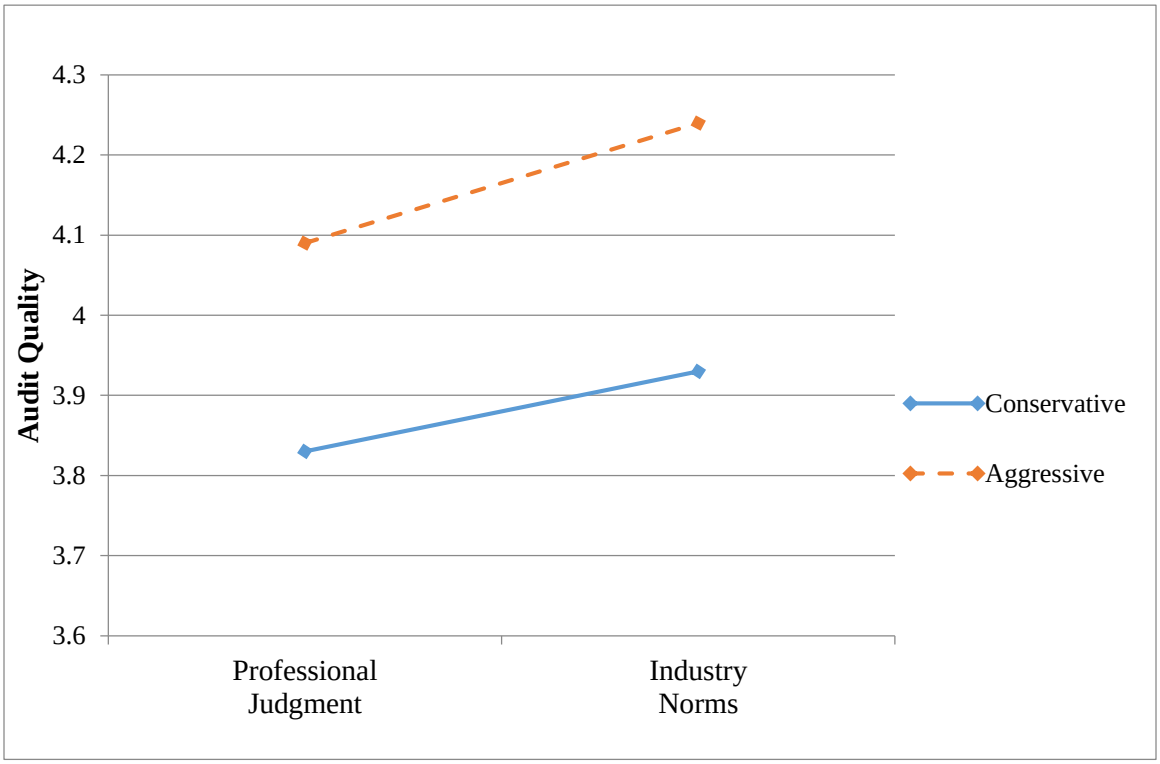
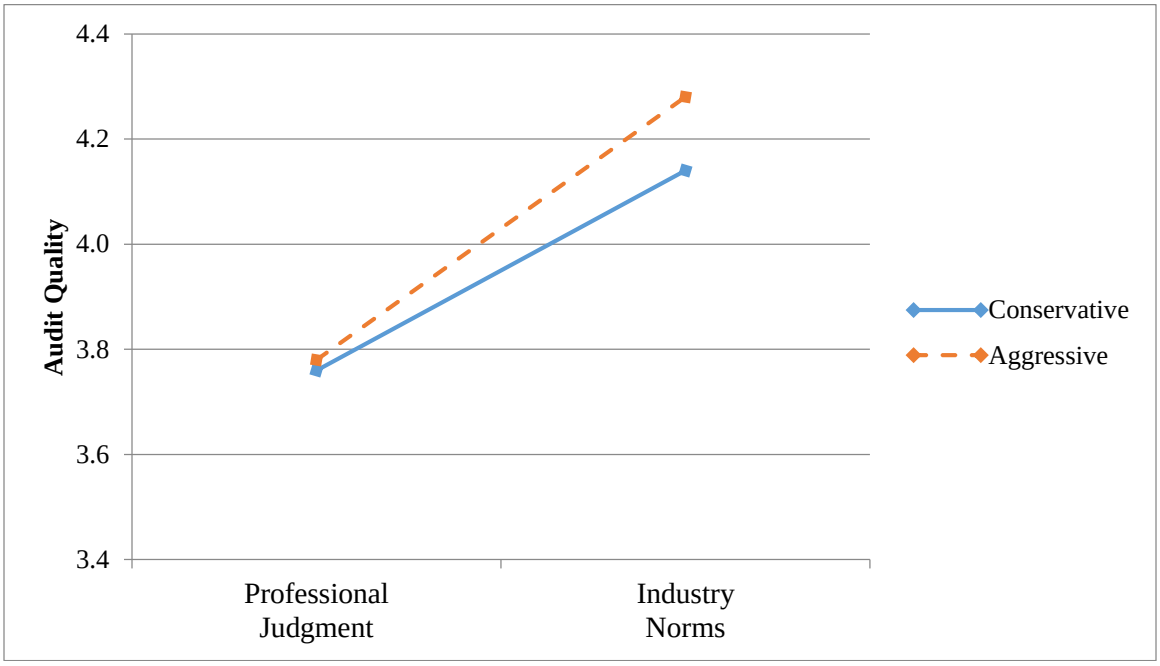


Figure 7 – Management Perceptions of Audit Quality Based on Accounting Attributes and Justification Method (H2)

A



B

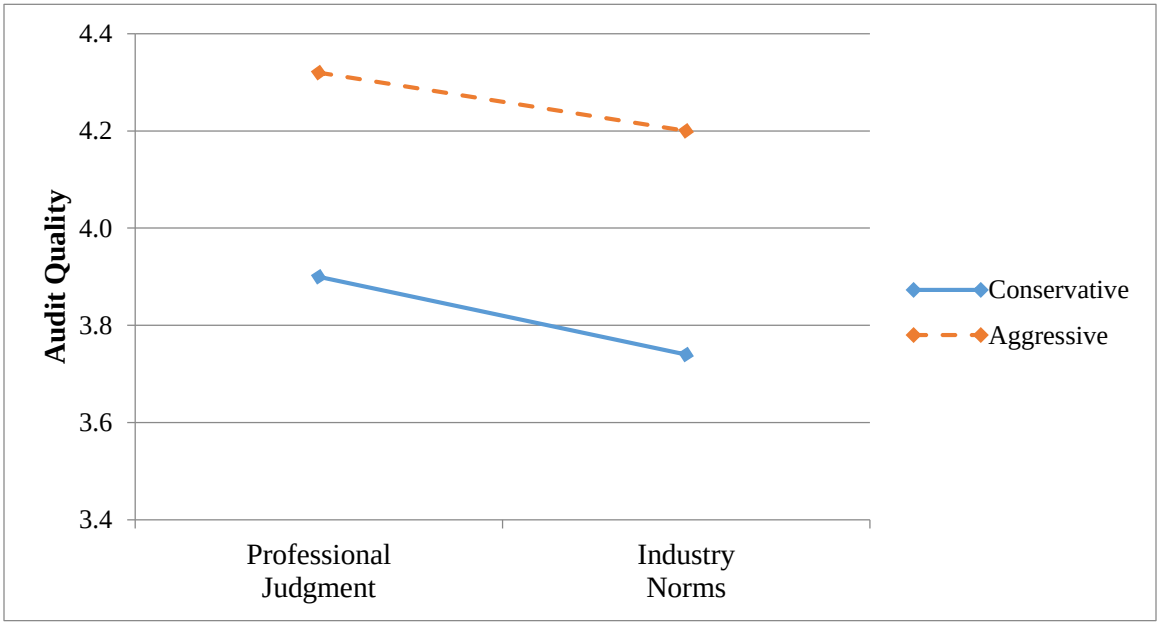


Figure 8: Management Perceptions of Audit Quality Based on Accounting Attributes and Justification Method (H3). A) Less Precise Accounting Standards B) More Precise Accounting Standards

Table 12: Participant Demographics

Characteristic	Cell 1	2	3	4	5	6	7	8	Total
Participants	25	29	18	25	25	24	24	22	192
Age (mean)	41	43	46	41	46	43	49	41	44
Gender									
Male	19	22	15	17	19	19	19	14	144
Female	5	5	2	6	4	5	4	5	36
Highest Education									
Bachelors	7	10	4	8	10	8	9	3	59
Masters	16	16	11	15	12	15	13	16	114
Doctorate	1	1	2	0	1	1	1	0	7
Highest Degree									
Accounting	17	21	12	19	18	16	20	15	138
Bus. Admin.	5	6	5	6	4	6	5	5	42
Finance	1	3	2	0	3	3	3	0	15
Other	2	0	1	3	7	1	2	3	19
CPA License	15	14	10	13	9	16	14	8	99
Audit Experience									
External	14	13	7	14	9	12	13	8	90
Internal	2	5	6	4	5	8	6	8	44
Govt	2	2	2	1	2	3	3	1	16
Employed	23	25	15	21	21	21	20	18	164
Work Exp. (mean)	12	14	16	13	17	16	18	13	15
Job Title									
CEO	1	1	3	0	4	2	1	0	12
CFO	1	4	0	4	2	6	2	1	20
VP Finance	0	0	1	0	1	3	0	1	6
Dir. Fin. Rep.	0	2	1	1	0	0	0	0	4
Controller	6	0	2	3	2	5	4	4	26
Acctg Manager	3	6	1	6	3	1	2	4	26
Other*	13	14	9	9	11	7	14	9	86

* Participants in this category described their position using some of the following titles: accountant, administrative director, auditor, budget manager, chief internal auditor, COO, director, owner, partner, treasurer, and VP of operations

Table 13: Descriptive and ANCOVA Analysis for Likelihood that Auditor Decision Is Correct (H1)

Descriptives

	Professional judgment	Industry norms
Mean	3.28	3.78
St. Dev.	0.96	0.94
n=	97	95

ANCOVA analysis

	df	Sum of Squares	Mean Square	F	p-value
External audit experience	1	5.33	5.33	6.11	0.014
Justification method	1	11.38	11.38	13.04	0.000

Table 14: Descriptive and ANCOVA Analysis for Perception of Audit Quality Based on Accounting Attributes and Justification Method (H2)

Descriptives: mean (st. dev.)

	Professional judgment	Industry norms	Total
Conservative	3.83	3.93	3.88
	(1.06)	(1.18)	(1.11)
	n=54	n=45	n=99
Aggressive	4.09	4.24	4.17
	(1.17)	(1.08)	(1.12)
	n=43	n=50	n=93
Total	3.95	4.09	4.02
	(1.11)	(1.13)	(1.12)
	n=97	n=95	n=192

ANCOVA analysis

	df	Sum of Squares	Mean Square	F	p-value
External audit experience	1	8.91	8.91	7.60	0.006
Professional experience	1	7.06	7.06	6.03	0.015
Justification method	1	0.90	0.90	0.77	0.380
Accounting attributes	1	4.76	4.76	4.06	0.0225*
Justification*Attributes	1	0.36	0.36	0.31	0.578

** one-tailed*

Table 15: ANCOVA Analysis for Perception of Audit Quality Based on Accounting Attributes, Framework, and Justification Method (H3)

	df	Sum of Squares	Mean Square	F	p-value
External audit experience	1	9.86	9.86	8.40	0.004
Professional experience	1	5.28	5.28	4.50	0.035
Justification method	1	1.11	1.11	0.95	0.331
Accounting attributes	1	3.97	3.97	3.38	0.034*
Framework	1	0.01	0.01	0.00	0.948
Justification*Attributes	1	0.47	0.47	0.40	0.527
Justification*Framework	1	3.40	3.40	2.90	0.045*
Attributes*Framework	1	0.98	0.98	0.83	0.362
3-way interaction	1	0.31	0.31	0.27	0.607

** one-tailed*

Table 16: Descriptive and ANCOVA Analysis for Perception of Audit Quality Based on Accounting Attributes and Justification Method under Low Precision (H3)

Descriptives: mean (st. dev.)

	Professional judgment	Industry norms	Total
Conservative	3.76	4.14	3.94
	(1.10)	(1.13)	(1.07)
	n=25	n=22	n=47
Aggressive	3.78	4.28	4.07
	(1.40)	(1.14)	(1.26)
	n=18	n=25	n=43
Total	3.77	4.21	4.00
	(1.17)	(1.12)	(1.16)
	n=43	n=47	n=90

ANCOVA analysis

	df	Sum of Squares	Mean Square	F	p-value
External audit experience	1	1.07	1.07	0.83	0.366
Professional experience	1	5.07	5.07	3.91	0.051
Justification method	1	4.06	4.06	3.14	0.040*
Accounting attributes	1	0.78	0.78	0.60	0.442
Justification*Attributes	1	0.54	0.54	0.41	0.522

** one-tailed*

CHAPTER 5

CONCLUSION

In this dissertation I investigate questions related to management perceptions of audit quality. After reviewing the literature related to audit quality, including perceptions of audit quality, and the impact of principles-based accounting standards on auditor and management decision making, I identified two major questions that have not been addressed in accounting research. First, what factors are important to management for defining and evaluating audit quality? Second, how does an auditor's use of industry norms under imprecise accounting guidance impact management perceptions of audit quality?

In order to answer these questions, I conducted two related studies. First, I surveyed management participants about how they define audit quality and how auditors are able to demonstrate audit quality on an engagement. I find that when defining audit quality, management focuses on input, process, and output characteristics; however, they focus mostly on input and process characteristics when evaluating auditors. I also find that interpersonal relationships, especially related to communication between management and auditors, are very important to management.

Second, I performed an experiment that investigates the impact of an auditor's use of industry norms to justify an audit adjustment under imprecise accounting standards. I

find that when accounting standards are more precise, an auditor's justification method does not impact management perceptions of audit quality; rather, management focuses on the underlying accounting attributes of the adjustment and uses that information to evaluate the audit quality provided. When accounting standards are less precise, however, audit quality is rated higher when auditors justify a decision using an industry norm. Thus, auditors are incentivized to engage in herding behavior and default to following an industry norm when accounting standards are imprecise, regardless of whether or not that industry norm is the most appropriate method of accounting for a transaction.

There are two primary limitations to this research. First, the participant group consisted of individuals who are primarily familiar with US GAAP. Since Chapter 4 investigates differences between a rules-based and principles-based accounting framework, the results of this research may be driven by the background of the participants more so than by the manipulations of the experiment. Future research would benefit from similar experiments that include participants who are more familiar with IFRS.

The second limitation relates to the format of the exploratory research in Chapter 3. The survey questions were administered in conjunction with the experiment performed in Chapter 4, which caused two potential problems. First, the requested information had to be limited in order to avoid increasing the time of participation (and thus reducing the response rate). Second, the online format used for data collection prevented any follow up questions that arose during analysis. Future research in this area may focus on incorporating additional methods, such as face-to-face interviews, to

provide management participants an opportunity to elaborate on questions and provide more context around finding from the initial analysis.

Future research in this area can continue along two related paths. The first is to look at additional auditor decisions and understand how they impact management perceptions of audit quality. Potential auditor decisions that could be investigated include: amount and type of evidence reviewed by auditors, level of manager and partner involvement in the early stages of the audit, and types of audit tests performed. Some of these areas have been investigated for their impact on an engagement review (i.e., when a supervisor auditor reviews the work of a junior member of the engagement team), but there has been much less work performed on the impact of these decisions on management.

The second potential area for future research involves investigating how auditor decisions are perceived by other stakeholders in the audit process, such as audit committees, regulators, investors, and quality control reviewers. Although some prior research has investigated how these different groups perceive audit quality, each group is underrepresented in the accounting literature when compared to the amount of research on juror perceptions of audit quality. Thus, there is a significant opportunity to broaden an understanding of these other auditor evaluator groups.

APPENDIX

EXPERIMENTAL MATERIALS

Screening Questions for Eligibility
(All Conditions)

The following questions will help to determine if you have the type of work experience that is being targeted by this study.

1. Are you currently employed as an external auditor for a public accounting firm?

    a. Yes
    b. No

2. Do you currently, or have you ever, had responsibility over any aspect of the financial reporting process for an employer? Examples may include, but are not limited to:
    - Performance of, or supervision over, any of the activities included below:
        - Preparation of any part of a quarterly or annual financial report
        - Preparation of month-end or period-end closing or adjusting entries
        - Preparation of company budgets or revenue forecasts
        - Design or implementation of controls over the financial reporting process
    - Any other activities similar to the ones listed above

    a. Yes
    b. No

3. Do you currently, or have you ever, interacted with your company's external auditor in the normal course of business?

    a. Yes
    b. No

Statement of Consent
(All Conditions)

Evaluating Management Perceptions of Audit Quality

The purpose of this research study is to understand how auditor decisions impact management perceptions. We are doing this study because we would like to better understand the implications of audit decisions, which may help auditors and management to be more aligned in the audit process.

As part of this study you will be asked to imagine yourself as controller of a company. You will be presented with the information surrounding a current year audit and asked to make judgments related to several proposed audit adjustments.

After making the above judgments, you will be asked several questions that will help the researcher to ensure the manipulations of the experiment were both clearly understood and effective. Finally, you will be asked to provide some basic demographic information. The demographic information will assist in analyzing the data for trends, relationships, etc. No personally identifiable information will be collected and all responses will remain anonymous. All information collected will reside in the possession of the primary investigator and will only be used for analysis related to the stated research interests.

If you have any questions or complaints, or if you feel you have been harmed by this research please contact Erik Boyle, David Eccles School of Business, (801) 678-7175 or erik.boyle@business.utah.edu.

Contact the Institutional Review Board (IRB) if you have questions regarding your rights as a research participant. Also, contact the IRB if you have questions, complaints or concerns which you do not feel you can discuss with the investigator. The University of Utah IRB may be reached by phone at (801) 581-3655 or by e-mail at irb@hsc.utah.edu.

It should take 15-20 minutes to complete the questionnaire. Participation in this study is voluntary. You can choose not to take part. You can choose not to finish the questionnaire or omit any question you prefer not to answer without penalty or loss of benefits.

By submitting this questionnaire, you are giving your consent to participate.

Thank you for your assistance with this research.

Part 1 Introduction
(All Conditions)

In Part 1 of this study, you will be asked to assume the role of the controller for your company and will respond to a proposed audit adjustment over the allowance for doubtful accounts

Justification Method Baseline Measure
(Professional Judgment Condition)

ALLOWANCE FOR DOUBTFUL ACCOUNTS

Imagine you are the controller of your company. One of the significant balances on your financial statements is the Allowance for Doubtful Accounts. You have prepared an analysis of outstanding Accounts Receivables (AR) and calculated an allowance based on a percentage of outstanding receivables in the different AR classifications (e.g. <30 days outstanding, 30-60 days, 90-120 days, etc.). Because this is the first year of your company's existence, you are not able to rely on prior history to determine the most likely percentage of uncollectible accounts in each classification, but you do have 15 years of experience in a similar industry.

During your year-end audit, the audit manager expresses a belief that the Allowance for Doubtful Accounts is too low and proposes an audit adjustment to increase the amount. When you ask why an adjustment is necessary, you are told that, **based on the audit manager's own professional judgment and expertise**, the allowance is insufficient to support the outstanding AR.

Justification Method Baseline Measure
(Industry Norms Condition)

ALLOWANCE FOR DOUBTFUL ACCOUNTS

Imagine you are the controller of your company. One of the significant balances on your financial statements is the Allowance for Doubtful Accounts. You have prepared an analysis of outstanding Accounts Receivables (AR) and calculated an allowance based on a percentage of outstanding receivables in the different AR classifications (e.g. <30 days outstanding, 30-60 days, 90-120 days, etc.). Because this is the first year of your company's existence, you are not able to rely on prior history to determine the most likely percentage of uncollectible accounts in each classification, but you do have 15 years of experience in a similar industry.

During your year-end audit, the audit manager expresses a belief that the Allowance for Doubtful Accounts is too low and proposes an audit adjustment to increase the amount. When you ask why an adjustment is necessary, you are told that, **based on a comparison with the allowances of other companies in the same industry,** the allowance is insufficient to support the outstanding AR.

Part 1 Dependent Variable
(All Conditions)

1. What do you believe is the likelihood that the auditor's decision to increase the allowance is correct (please circle one)?

Definitely Wrong	*Probably Wrong*	*Possibly Wrong*	*Possibly Right*	*Probably Right*	*Definitely Right*

Part 2 Introduction
(All Conditions)

You will now begin Part 2 of the study. In Part 2, you will again assume the role of controller, although for a different company than Part 1. This time you will be asked to respond to a proposed adjustment over the classification of several leases.

Lease Criteria
(More Precision Condition)

LEASE CRITERIA

In order to complete this task, it is important that you understand the accounting standards related to lease classification under **United States Generally Accepted Accounting Principles (U.S. GAAP)**. U.S. GAAP is generally considered to be a rules-based framework and is characterized by detailed guidance and specific bright-line tests for determining the appropriate accounting treatment for transactions. Thus, the focus is on correctly applying **specific rules** to accounting transactions.

From a lessee's perspective, all leases are classified as either **capital** or **operating** leases. Differences in these leases will be explained on a following page. Under U.S. GAAP, a lease MUST be classified as a capital lease if it meets any one of four criteria. For purposes of this study, only one criterion needs to be considered:

> If the lease term is equal to **75% or more** of the **estimated economic life** of the leased property, then the lease must be classified as a capital lease.

NOTE: A bargain renewal option is an option to renew a lease at a price sufficiently below market value such that the exercise of the option is reasonably assured at the date of the lease's inception. The lease term includes the **bargain** renewal period. **Not all** renewal options are considered a bargain.

Lease Criteria
(Less Precision Condition)

LEASE CRITERIA

In this section, you will evaluate a proposed audit adjustment. In order to complete this task, it is important that you understand the accounting standards related to lease classification under **International Financial Reporting Standards (IFRS)**. IFRS is generally considered to be a principles-based framework and is characterized by a lack of detailed guidance and specific bright-line tests for determining the appropriate accounting treatment for transactions. Thus, the focus is on correctly applying **overarching principles** to specific accounting transactions.

From a lessee's perspective, all leases are classified as either **finance** or **operating** leases. Differences in these leases will be explained on a following page. Under IFRS, a lease MUST be classified as a finance lease if it transfers substantially all of the risks and rewards of ownership. The standard lists several criteria that MAY indicate this threshold has been met. For purposes of this study, only one criterion needs to be considered:

> If the lease term is for the **major part** of the **estimated economic life** of the leased property, then the lease may need to be classified as a finance lease.

NOTE: A bargain renewal option is an option to renew a lease at a price sufficiently below market value such that the exercise of the option is reasonably assured at the date of the lease's inception. The lease term includes the **bargain** renewal period. **Not all** renewal options are considered a bargain.

Comprehension Checks
(All Conditions)

1. Which accounting framework was discussed on the previous page?
    a. United States Generally Accepted Accounting Principles (US GAAP)
    b. International Financial Reporting Standards (IFRS)
    c. Both
    d. Neither

2. Based on the information provided, what is the criterion for determining how a lease should be classified?
    a. The lease term is equal to 60% or more of the estimated economic life of the leased property.
    b. The lease term is equal to 75% or more of the estimated economic life of the leased property.
    c. The lease term is equal to 90% or more of the estimated economic life of the leased property.
    d. The lease term is for the major part of the estimated economic life of the leased property.

Classification Differences
(More Precision Condition)

RECORDING THE LEASE

For financial statement purposes, a **capital lease** is recorded as a **purchase** of an asset. An **operating lease** is recorded as a **rental**. The table below summarizes the main differences.

	Capital Lease	Operating Lease
Balance Sheet Effects	An asset and an associated liability are recorded on the balance sheet at the present value of the future minimum lease payments.	There are no entries made that affect the balance sheet.
Income Statement Effects	Depreciation and interest expense are recorded on the income statement over the life of the lease.	Rental expense is recorded on the income statement over the life of the lease.
Other Effects	Reduces income more in the early years of a lease as interest expense is higher.	Reduces income more in the later years of a lease as interest expense is lower.

Companies typically prefer to record a lease as an operating lease for at least three reasons:

1. Liabilities on the balance sheet are lower.
2. Expenses are lower in the early periods of the lease.
3. Expenses are stabilized over the life of the lease.

Classification Differences
(Less Precision Condition)

RECORDING THE LEASE

For financial statement purposes, a **finance lease** is recorded as a **purchase** of an asset. An **operating lease** is recorded as a **rental**. The table below summarizes the main differences.

	Finance Lease	Operating Lease
Balance Sheet Effects	An asset and an associated liability are recorded on the balance sheet at the present value of the future minimum lease payments.	There are no entries made that affect the balance sheet.
Income Statement Effects	Depreciation and interest expense are recorded on the income statement over the life of the lease.	Rental expense is recorded on the income statement over the life of the lease.
Other Effects	Reduces income more in the early years of a lease as interest expense is higher.	Reduces income more in the later years of a lease as interest expense is lower.

Companies typically prefer to record a lease as an operating lease for at least three reasons:

1. Liabilities on the balance sheet are lower.
2. Expenses are lower in the early periods of the lease.
3. Expenses are stabilized over the life of the lease.

Part 2 Overview
(More Precision Condition)

OVERVIEW

Beck Industries (the Company) is a manufacturer of medical imaging equipment. They were founded in 1988 and initially focused on manufacturing X-ray machines. As the Company grew, both internally and through mergers with other private medical imaging companies, they branched into the manufacture of both Computed Tomography (CT) and Magnetic Resonance Imaging (MRI) scanners. In 1997 the company undertook an Initial Public Offering (IPO) and is currently listed on the New York Stock Exchange. Beck Industries operates in accordance with United States Generally Accepted Accounting Principles (U.S. GAAP), which is typically described as a rules-based accounting framework. The Company has experienced relatively steady net income over the last 10 years. The Company's main competitors are Hitachi, Toshiba, Siemens, Phillips, and GE.

You are the controller for Beck Industries, a position that you have held for the last 7 years. As the controller, you act as the main liaison between the auditors and the rest of the Company's management group.

Prior to 2002, the Company used a regional auditing firm as their auditor. In 2002, the Company decided to separate the sources of their auditing and consulting services. The Company decided to use their previous auditors as their primary financial consultants and to engage a new audit firm. After a competitive bidding process, the Company hired a Big 4 auditor, and this firm is the Company's current auditor. The Company has always enjoyed a good relationship with the audit firm. The manager on the current year's audit is Taylor Emery. This is the 2nd year that Taylor has been the lead manager on this audit, and the Company was pleased with his performance on last year's audit.

The auditors are currently performing the testwork for the year-end audit. The deadline for filing the financial statements is 3 weeks away and the auditors are right on schedule.

Part 2 Overview
(Less Precision Condition)

OVERVIEW

Beck Industries (the Company) is a manufacturer of medical imaging equipment. They were founded in 1988 and initially focused on manufacturing X-ray machines. As the Company grew, both internally and through mergers with other private medical imaging companies, they branched into the manufacture of both Computed Tomography (CT) and Magnetic Resonance Imaging (MRI) scanners. In 1997 the company undertook an Initial Public Offering (IPO) and is currently listed on the London Stock Exchange. Beck Industries operates in accordance with International Financial Accounting Standards (IFRS), which is typically described as a principles-based accounting framework. The Company has experienced relatively steady net income over the last 10 years. The Company's main competitors are Hitachi, Toshiba, Siemens, Phillips, and GE.

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The auditors are currently performing the testwork for the year-end audit. The deadline for filing the financial statements is 3 weeks away and the auditors are right on schedule.

Audit Update
(All Conditions)

AUDIT UPDATE

On February 9, 2013, Taylor Emery met with you to provide an update on the audit. During this meeting you were presented with 3 audit adjustments that the audit team was recommending based on the results of their testwork.

Adjustment #1:

After evaluating the proposed adjustment, you agree with the auditors and decide to record the adjustment.

Adjustment #2:

After evaluating the proposed adjustment, you disagree with the auditors' decision. After you provide them with some additional information, the auditors agree with you that no adjustment is necessary.

Lease Classification
(Aggressive Condition)

LEASE CLASSIFICATION

The 3rd proposed audit adjustment relates to the classification of several leases that were entered into during the year. You will be asked to respond to this adjustment. The following is a description of the lease transactions:

On January 1, 2013, the Company entered into lease agreements for three identical machines that are used to manufacture MRI scanners. Due to the cost of the machines, these transactions have a significant impact on the company's financial statements. The terms of the lease are as follows:

- *Estimated economic life: 21 years*
- *Lease term: 13 years (62% of the estimated economic life)*
- *Annual lease payment: $600,000/month ($200,000 for each machine)*
- *Renewal option: At the end of the lease term, the company may extend the lease for 3 additional years.*
    - *If the option is exercised, the lease payment for the additional years will be at a discount of **30% below the market rental value** of the equipment at that point in time.*

After a thorough review of all relevant lease details, the Company determined that the lease should be classified as an **operating lease**. The Company's senior management group feels very strongly that this is the appropriate classification. Additionally, management bonuses, including your own, are tied to the Company's net income.

Lease Classification
(Conservative Condition)

LEASE CLASSIFICATION

The 3rd proposed audit adjustment relates to the classification of several leases that were entered into during the year. You will be asked to respond to this adjustment. The following is a description of the lease transactions:

On January 1, 2013, the Company entered into lease agreements for three identical machines that are used to manufacture MRI scanners. Due to the cost of the machines, these transactions have a significant impact on the company's financial statements. The terms of the lease are as follows:

- *Estimated economic life: 21 years*
- *Lease term: 13 years (62% of the estimated economic life)*
- *Annual lease payment: $600,000/month ($200,000 for each machine)*
- *Renewal option: At the end of the lease term, the company may extend the lease for 3 additional years. .*
    - *If the option is exercised, the lease payment for the additional years will at a discount of **10% below the market rental value** of the equipment at that point in time.*

After a thorough review of all relevant lease details, the Company determined that the lease should be classified as an **operating lease**. The Company's senior management group feels very strongly that this is the appropriate classification. Additionally, management bonuses, including your own, are tied to the Company's net income.

Proposed Audit Adjustment #3
(More Precision & Professional Judgment Conditions)

PROPOSED AUDIT ADJUSTMENT #3

After reviewing the lease contracts, the auditors came to the following preliminary conclusions:

- The discount on the renewal option was large enough that it should be classified as a bargain renewal option.
- If the renewal option is classified as a bargain, the lease term covers 76% of the estimated economic life of the asset. The auditors believe this to be a large enough percentage that the lease should be classified as a capital lease.

Taylor explained that this decision was based on evaluating the terms of the lease using the **professional judgment and experience** of the audit team.

Proposed Audit Adjustment #3
(Less Precision & Professional Judgment Conditions)

PROPOSED AUDIT ADJUSTMENT #3

After reviewing the lease contracts, the auditors came to the following preliminary conclusions:

- The discount on the renewal option was large enough that it should be classified as a bargain renewal option.
- If the renewal option is classified as a bargain, the lease term covers 76% of the estimated economic life of the asset. The auditors believe this to be a large enough percentage that the lease should be classified as a finance lease.

Taylor explained that this decision was based on evaluating the terms of the lease using the **professional judgment and experience** of the audit team.

Proposed Audit Adjustment #3
(More Precision & Industry Norms Conditions)

PROPOSED AUDIT ADJUSTMENT #3

After reviewing the lease contracts, the auditors came to the following conclusions:

- The discount on the renewal option was large enough that it should be classified as a bargain renewal option.
- If the renewal option is classified as a bargain, the lease term covers 76% of the estimated economic life of the asset. The auditors determined this to be a large enough percentage that the lease should be classified as a capital lease.

Taylor explained that this decision was based on a comparison of the lease with **similar leases held by companies in the same industry**.

Proposed Audit Adjustment #3
(Less Precision & Industry Norms Conditions)

PROPOSED AUDIT ADJUSTMENT #3

After reviewing the lease contracts, the auditors came to the following conclusions:

- The discount on the renewal option was large enough that it should be classified as a bargain renewal option.
- If the renewal option is classified as a bargain, the lease term covers 76% of the estimated economic life of the asset. The auditors determined this to be a large enough percentage that the lease should be classified as a finance lease.

Taylor explained that this decision was based on a comparison of the lease with **similar leases held by companies in the same industry**.

Adjusted Trial Balance
(All Conditions)

ADJUSTED TRIAL BALANCE

The Company's trial balance, both with and without audit adjustment #3, is presented below:

($ in thousands)	Without Adjustment	Adjustment	With Adjustment
Assets			
Current Assets	10,054		10,054
PPE	4,629	6,064	10,693
AD	(2,611)	(288)	(2,899)
Other Assets	5,313		5,313
Total Assets	17,385		23,161
Liabilities			
Liabilities	13,427	5,828	19,255
Equity			
Equity	3,958	(53)	3,905
Total Liabilities and Equity	17,385		23,161
Revenues			
Revenues	7,403		7,403
Expenses			
Cost of Goods Sold	3,866		3,866
Selling, General & Administrative	1,189	(600)	589
Depreciation & Amortization	986	289	1,275
Interest & other financial	250	364	614
Other expenses	887		887
Other	(175)		(175)
Net Income	49	(53)	(4)

Part 2 Dependent Variables
(All Conditions)

1. What do you believe is the likelihood that the auditor's decision to change the lease classification is correct?

Definitely Wrong	*Probably Wrong*	*Possibly Wrong*	*Possibly Right*	*Probably Right*	*Definitely Right*

2. Based on the information provided, would you revise your financial statements to include the proposed lease classification adjustment?

    a. Yes
    b. No

3. Please list all of the reason(s) for your selection.

_____

_____

_____

_____

4. Please list any additional information that you would like to have from the auditor in order to better understand the rationale for their decisions.

_____

_____

_____

_____

For the questions on the next page, assume the auditor requires you to change the lease classification in order to issue an unqualified [clean] audit opinion.

5. Based on the information provided, how would you rate the quality of the audit work provided by the auditors?

Extremely Low Quality	*Low Quality*	*Somewhat Low Quality*	*Somewhat High Quality*	*High Quality*	*Extremely High Quality*

6. Based on the information provided, what would be your recommendation for engaging this audit firm for the next year's audit?

Definitely No	*Probably No*	*Possibly No*	*Possibly Yes*	*Probably Yes*	*Definitely Yes*

7. Would your answer to Question #6 change if you could be assured that you would have a different manager on next year's engagement?
    a. Yes
    b. No

8. If you could be assured that you would have a different manager on the engagement, what would be your recommendation for engaging this audit firm for the next year's audit? (Please circle one)

Definitely No	*Probably No*	*Possibly No*	*Possibly Yes*	*Probably Yes*	*Definitely Yes*

Manipulation Check and Demographics Introduction
(All Conditions)

MANIPULATION AND DEMOGRAPHIC QUESTIONS

You have now completed the audit evaluation portion of the study. On the next few pages you will be asked some questions to ensure the study was clearly understood. You will also be asked some demographic questions that will be used to analyze the data in aggregate.

Manipulation Check Questions
(All Conditions)

1. Under which accounting framework did Beck Industries operate?
    a. United States Generally Accepted Accounting Principles (US GAAP)
    b. International Financial Reporting Standards (IFRS)
    c. Both
    d. Neither

2. Based on information provided in this questionnaire, what was the criterion for determining how a lease should be classified?
    a. The lease term is equal to 60% or more of the estimated economic life of the leased property.
    b. The lease term is equal to 75% or more of the estimated economic life of the leased property.
    c. The lease term is equal to 90% or more of the estimated economic life of the leased property.
    d. The lease term is for the major part of the estimated economic life of the leased property.

3. Which of the following did the auditors use to justify their decision to propose an adjustment to the lease classification?
    a. Professional judgment
    b. Firm provided interpretive guidance
    c. Comparison with similar leases within the industry
    d. Results from a firm decision aid

4. Please rate your agreement with the following statement:

    The auditor's rationale for changing the lease classification was credible.

Strongly Disagree	*Disagree*	*Somewhat Disagree*	*Somewhat Agree*	*Agree*	*Strongly Agree*

5. Please rate your agreement with the following statement as it relates to the lease accounting standard:

    The accounting standard provides enough flexibility that the leases can be reasonably classified as EITHER capital/finance or operating leases.

Strongly Disagree	*Disagree*	*Somewhat Disagree*	*Somewhat Agree*	*Agree*	*Strongly Agree*

6. How did the company initially classify their leases?
    a. Capital/Finance
    b. Operating

7. What discount did Beck Industries receive if they chose to exercise the renewal option?
    a. 5% below fair market value
    b. 10% below fair market value
    c. 20% below fair market value
    d. 30% below fair market value

8. Please rate your level of motivation to prevent the auditors from adjusting the financial statements.

Extremely Low	*Low*	*Somewhat Low*	*Somewhat High*	*High*	*Extremely High*

Less Precision Lease Term Percentage Manipulation Check
(Less Precision Condition)

In relation to the lease classification criterion, what percentage of an asset's economic life, in your opinion, would need to be covered in order to be considered "for the major part"? In other words, fill in the blank in the following statement.

Leases with a lease term that covers _____% or more of an asset's estimated economic life should be classified as a finance lease.

US GAAP Lease Standard Manipulation Check
(Less Precision Condition)

1. United States Generally Accepted Accounting Principles (U.S. GAAP) also contains guidance related to how lease terms impact the classification for leases. If you are familiar with the guidance in the United States, please fill in the blank for the following statement. Otherwise, please select "I am not familiar with this guidance."

   If the lease term is equal to _____ of the estimated economic life of the leased property, then the lease must be classified as a capital lease. Otherwise, the lease should be classified as an operating lease.

   a. 60% or more
   b. 75% or more
   c. 90% or more
   d. The major part
   e. I am not familiar with this guidance

2. Please indicate the extent to which you relied on your knowledge of the lease classification guidance under U.S. GAAP in order to evaluate the auditor's decision to propose an adjustment to the classification of the leases.

No Reliance	*Some Reliance*	*Moderate Reliance*	*Significant Reliance*	*Complete Reliance*

IFRS Lease Standard Manipulation Check
(More Precision Condition)

1. International Financial Reporting Standards (IFRS) also contains guidance related to how lease terms impact the classification for leases. If you are familiar with the International guidance, please fill in the blank for the following statement. Otherwise, please select "I am not familiar with this guidance."

   If the lease term is for _____ of the estimated economic life of the leased property, then the lease may need to be classified as a finance lease.

   a. 60% or more
   b. 75% or more
   c. 90% or more
   d. The major part
   e. I am not familiar with this guidance

2. Please indicate the extent to which you relied on your knowledge of the lease classification guidance under IFRS in order to evaluate the auditor's decision to propose an adjustment to the classification of the leases.

No Reliance	*Some Reliance*	*Moderate Reliance*	*Significant Reliance*	*Complete Reliance*

Demographic Questions
(All Conditions)

1. What is your gender?
    a. Male
    b. Female

2. What is your age?
    a. 18-25
    b. 26-30
    c. 31-35
    d. 36-40
    e. 41-45
    f. 46-50
    g. 51-55
    h. 56-60
    i. 60+

3. What is the highest level of education you have completed?
    a. High school
    b. Associates degree
    c. Bachelors degree
    d. Masters degree
    e. Doctorate degree
    f. Other professional degree (please describe)_____

4. In what subject(s) did you receive your highest degree?
    a. Accounting
    b. Business management
    c. Economics
    d. Entrepreneurship
    e. Finance
    f. Information systems
    g. Operations
    h. Other (please list)_____

5. Are you, or have you ever been, licensed as a Certified Public Accountant (CPA)?
    a. Yes
    b. No

6. Please list any other professional certifications that you have obtained. _____

7. Are you currently employed?
    a. Yes
    b. No

8. How many years of professional work experience do you have?
    a. 0
    b. 1-3
    c. 4-6
    d. 7-10
    e. 11-15
    f. 16-20
    g. 20+

9. Do you, or have you ever, worked as the following types of auditor?

External	*Yes*	*No*
Internal	*Yes*	*No*
Governmental	*Yes*	*No*

10. With the exception of any time spent as an external auditor, what is the approximate number of audit engagements on which you have had direct interaction with external auditors?
    a. 0
    b. 1-3
    c. 4-6
    d. 7-10
    e. 11-15
    f. 15%

11. How would you rate your level of experience with the following accounting frameworks?

U.S. GAAP	*Not at all Familiar*	*Somewhat Familiar*	*Moderately Familiar*	*Very Familiar*	*Extremely Familiar*
IFRS	*Not at all Familiar*	*Somewhat Familiar*	*Moderately Familiar*	*Very Familiar*	*Extremely Familiar*

12. What is your experience level in classifying leases?

No Experience	*Some Experience*	*Moderate Experience*	*Significant Experience*	*Extensive Experience*

13. Please indicate the extent to which you agree with the following statements based on your perception of the audit profession in general.

Auditors provide a valuable service to their clients	*Do Not Agree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*	*Completely Agree*
Proposed audit adjustments should always be accepted by audit clients	*Do Not Agree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*	*Completely Agree*
Auditors primary motivation on an audit is to ensure the accounting is correct	*Do Not Agree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*	*Completely Agree*
Auditors know more about the correct application of accounting standards than their clients	*Do Not Agree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*	*Completely Agree*
Auditors are co-creators (with their clients) of financial statements	*Do Not Agree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*	*Completely Agree*
An auditor's main role is to approve the financial statements that are created by management of their client	*Do Not Agree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*	*Completely Agree*

14. Please indicate the extent to which you agree with the following statement: When accounting standards are flexible and/or ambiguous, a company will always improve financial statement quality by making their accounting similar to the accounting of industry peers.

Do Not Agree	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*	*Completely Agree*

15. Please select your job title?
    a. CEO
    b. CFO
    c. Vic President of Finance
    d. Director of Financial Reporting
    e. Controller
    f. Accounting Manager
    g. Other (please describe)_____

16. In what industry would you classify your employer? Note: The following industries are classified by SIC code. Please select the best response.
    a. Agriculture, Forestry & Fishing
    b. Mining
    c. Construction
    d. Manufacturing
    e. Transportation, Communications, Electric, Gas, and Sanitary Services
    f. Wholesale Trade
    g. Retail Trade
    h. Finance, Insurance, and Real Estate
    i. Services
    j. Public Administration

17. Which of the following best describes your employer?
    a. Privately owned
    b. Publicly traded
    c. Government entity

18. In what region of the country is your employer headquartered? Note: Please refer to the regions listed in the picture above.[38]
    a. New England
    b. Mideast
    c. Southeast
    d. Great Lakes
    e. Plains
    f. Rocky Mountain
    g. Southwest
    h. Far West
    i. My company is not headquartered in the United States

The following question is only shown if participants select the last response from Question #18.

19. Where is your employer headquartered?
    a. North America (excluding the U.S.)
    b. Central America
    c. South American
    d. Europe
    e. Asia
    f. Middle East
    g. Africa
    h. Australia or the Pacific Islands
    i. Other_____

20. Approximately how many people are employed by your company?
    a. <50
    b. 51-100
    c. 101-1,000
    d. 1001-10,000
    e. 10,001-100,000
    f. >100,000

21. What type of device did you use to access this study?
    a. PC/Laptop
    b. Tablet
    c. Smartphone
    d. Other (please)_____

[38] Image not included due to copyright restrictions.

22. Please indicate how much of the survey you feel that you understood.

I understood nothing				*I understood everything*
1	*2*	*3*	*4*	*5*

Audit Quality Survey Introduction
(All Conditions)

For the final part of this study, you will be asked to respond to a couple of questions regarding your perceptions of audit quality.

Audit Quality Survey Questions
(All Conditions)

1. Please describe what "Audit Quality" means to you.

2. Please describe way(s) that external auditors have demonstrated high audit quality. Please focus only on interactions that you have had with auditors during a time you were employed with the auditor's client.

3. The Center for Audit Quality recently identified several potential indicators of audit quality. Please rate how valuable knowledge of the information contained in each of the following categories would be for evaluating audit quality.

Firm Leadership and Tone at the Top	*No Value*	*Minimal Value*	*Moderate Value*	*Large Value*	*Significant Value*
Knowledge and Experience of Key Engagement Team	*No Value*	*Minimal Value*	*Moderate Value*	*Large Value*	*Significant Value*
Audit Firm Training Requirements	*No Value*	*Minimal Value*	*Moderate Value*	*Large Value*	*Significant Value*
Trends in Engagement Hours and Related Timing	*No Value*	*Minimal Value*	*Moderate Value*	*Large Value*	*Significant Value*
Allocation of Resources by Significant Risk Areas	*No Value*	*Minimal Value*	*Moderate Value*	*Large Value*	*Significant Value*
Workloads for Key Engagement Team Members	*No Value*	*Minimal Value*	*Moderate Value*	*Large Value*	*Significant Value*
Internal Quality Review Findings	*No Value*	*Minimal Value*	*Moderate Value*	*Large Value*	*Significant Value*
PCAOB Inspection Findings	*No Value*	*Minimal Value*	*Moderate Value*	*Large Value*	*Significant Value*
Reissuance Restatements and Withdrawn Auditor's Reports	*No Value*	*Minimal Value*	*Moderate Value*	*Large Value*	*Significant Value*

4. In reference to the company your currently work for, please assess the level of influence each of the following groups exerts in selecting the external auditor:

Board of Directors	*No Influence*	*Some Influence*	*Moderate Influence*	*Large Influence*	*Significant Influence*	*I Don't Know*
Audit Committee	*No Influence*	*Some Influence*	*Moderate Influence*	*Large Influence*	*Significant Influence*	*I Don't Know*
Senior Management (CEO, CFO, etc)	*No Influence*	*Some Influence*	*Moderate Influence*	*Large Influence*	*Significant Influence*	*I Don't Know*
Other Management	*No Influence*	*Some Influence*	*Moderate Influence*	*Large Influence*	*Significant Influence*	*I Don't Know*
Principal Owners	*No Influence*	*Some Influence*	*Moderate Influence*	*Large Influence*	*Significant Influence*	*I Don't Know*

5. In your opinion, how much influence does audit quality have on the quality of the financial statements?

No Influence	*Some Influence*	*Moderate Influence*	*Large Influence*	*Significant Influence*

Compensation Choice
(All Conditions)

Thank you for your participation in this study. As a token of appreciation, you may choose one of the following options:

1. You may choose to receive a $10 gift card from Amazon.com. If you select this option, you will need to enter a valid email address. Your email address will not be shared with any third-party and will be used only for distribution of the gift card.
2. You may choose to have $10 donated on your behalf to one of the following charitable organizations:
    a. The University of Utah David Eccles School of Business General Scholarship Fund
    b. The American Red Cross
    c. Huntsman Cancer Institute
    d. Habitat for Humanity

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